iZotope Alloy 2
Help Documentation

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Introduction
Authorization

Each purchased copy of Alloy 2 contains a unique serial number printed on the installer DVD sleeve. If Alloy 2 has been downloaded directly from iZotope or another re-seller the serial number will be e-mailed along with the link to download the product. The serial number should resemble:

SN-ALLOY2-XXXX-XXXX-XXXX-XXXX

Launching the Authorization Wizard

The first time you open Alloy 2, the Authorization Wizard will appear. You can choose to either authorize Alloy or use it in Trial mode for evaluation purposes. Please use your supplied Alloy 2 serial number to fully authorize your product.

Trial vs. Demo Mode

For the first 10 days after installation, Alloy will run in Trial mode, which offers full functionality. After 10 days, Alloy will revert to Demo mode. In Demo mode, Alloy will intermittently mute audio output.

Authorizing Your Copy of Alloy 2 Online

After opening Alloy 2 and launching the Authorization Wizard, the following steps will complete the authorization process online:

1. First, click on 'Authorize'.

2. Next, enter the serial number in all capital letters as it it shown on your DVD sleeve or e-mailed to you.

SN-ALLOY2-XXXX-XXXX-XXXX-XXXX

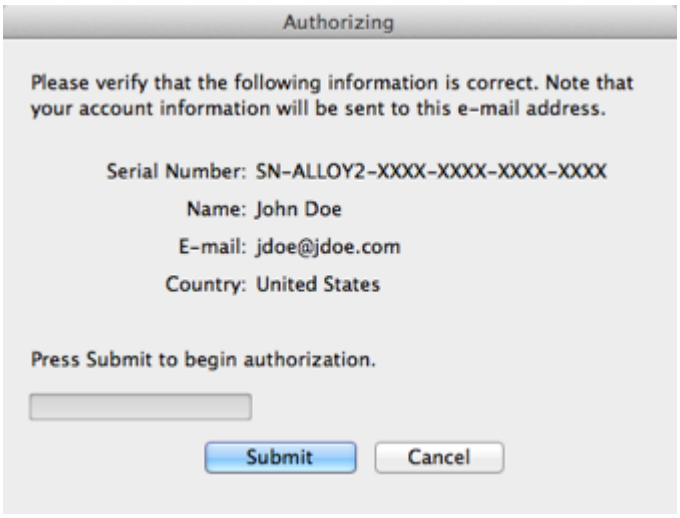
3. You must also enter your name and a valid e-mail address.

Note: Clicking the 'Advanced' button reveals a set of options that allow you to store your Alloy authorization on a portable hard drive or flash drive. Click here for more information on these options.

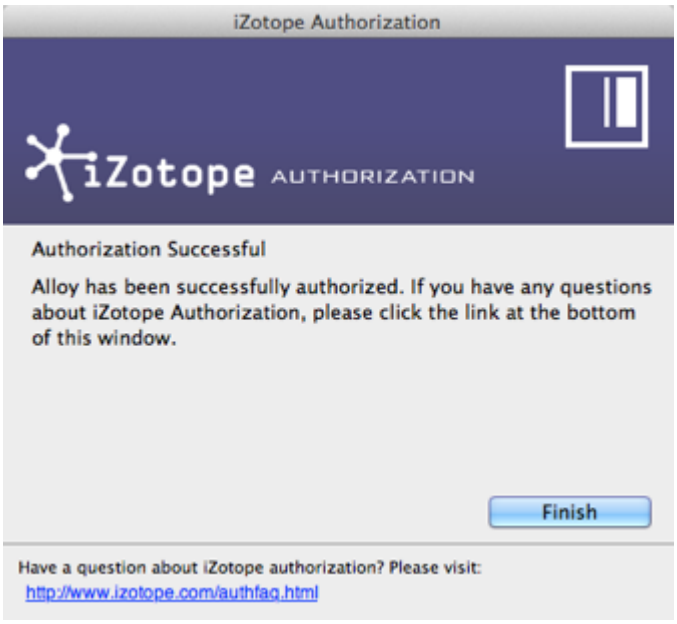
Make note of the e-mail address you use to authorize your license. Your license and iZotope account will be linked directly to this e-mail address.

4. When you have confirmed that your serial number and e-mail information is accurate, click once more on 'Authorize'.

5. Lastly, click on 'Submit' in order to send your authorization message to the iZotope servers.



If the authorization is accepted, click on the 'Finish' button to complete the authorization.

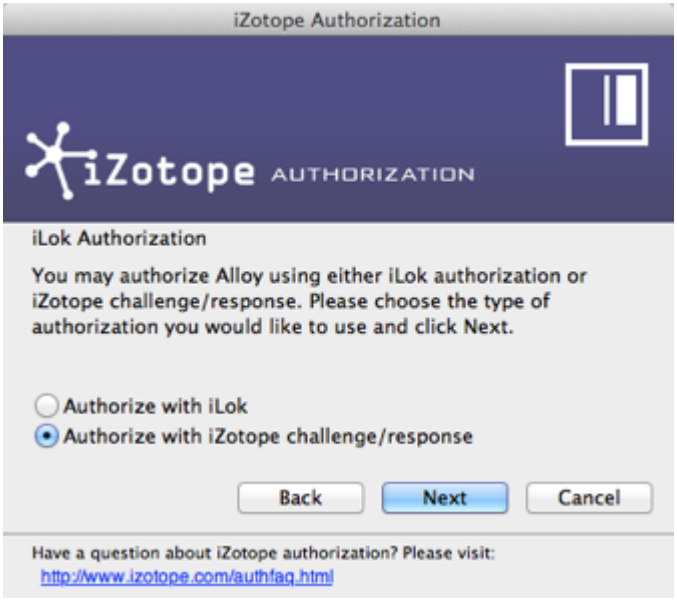


Authorizing Your Copy of Alloy 2 Offline

Some customers choose to keep their audio workstations offline, and a simple offline authorization option has been included. After opening Alloy 2 and launching the Authorization Wizard, the following steps will complete the authorization process offline:

1. When first prompted to authorize Alloy 2, click on 'Authorize'

2. Next, click on the option for 'Offline Authorization' at the bottom of the authorization window, select "Authorize with iZotope challenge/response" and click next.



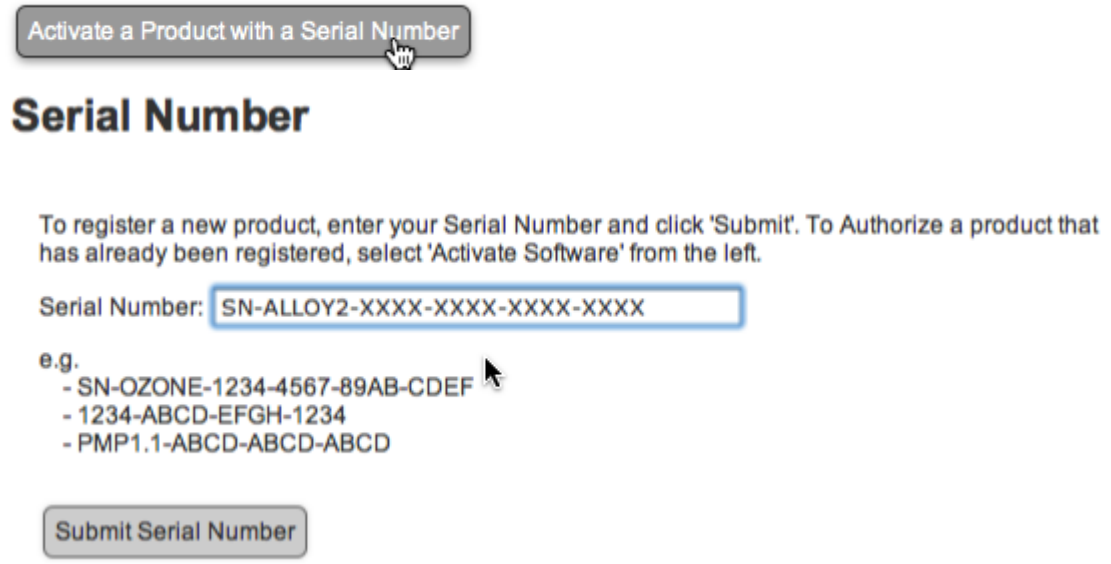
3. You will be given a unique Challenge Code that is specific to your computer only. Write down or make a copy of the exact Challenge Code. It will look like this:

IZ-ALLOY2-XXXXXXXX-XXXX-XXXX

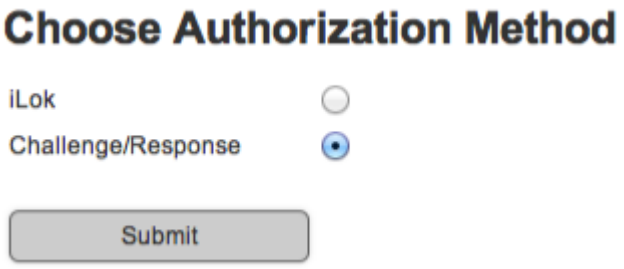
4. Next, using a system with internet access, login to your [customer account] at the iZotope website.

http://www.izotope.com/store/account.asp

5. Click the 'Activate Software with a Serial Number' button, enter your full serial number and click 'Submit'.



6. Select the 'Challenge/Response' option and click on 'Submit'.



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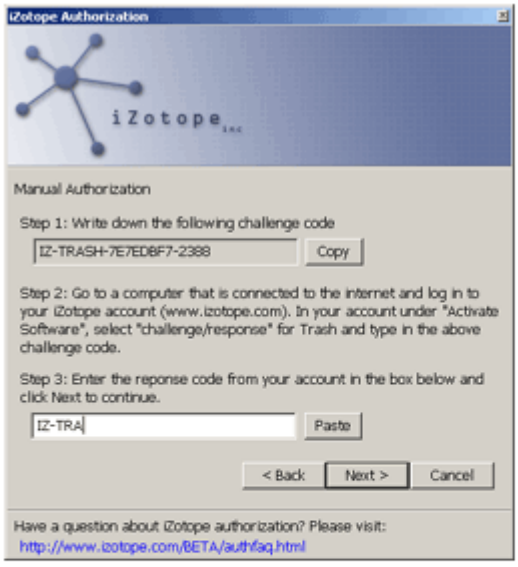
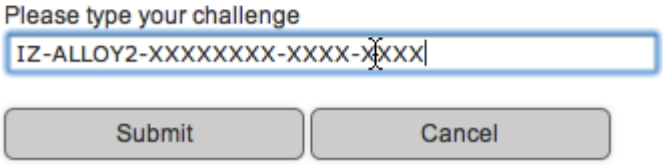
7. Read the License Agreement and click "Agree" if you find it agreeable.

8. Now enter your full Challenge Code copied in step 3.





9. After submitting your Challenge Code, you will receive a unique authorization file named 'iZotope_Alloy_2_XXXXX.izotopelicense.xml' that you then need to copy to your offline computer.

10. Once the authorization file is copied over to your offline computer using a network, hard drive or USB stick, click the 'Choose File...' button in your authorization wizard.

11. Navigate and select the authorization file and click 'Next' to authorize your machine.

12. You should now receive a message that your authorization has been successful and may click Finish to begin using Alloy 2.

iLok Support

Alloy 2 does support iLok. Our plug-ins will be able to detect iLok keys and assets if you already use iLok and PACE software on your system. If you don't already have PACE or iLok, we will not install any PACE or iLok software to your system, and iLok authorizations will be

unavailable.

Authorizing Alloy with iLok

1. When first prompted to authorize Alloy 2, click on 'Authorize'

2. Next, enter the serial number in all capital letters as it it shown on your DVD sleeve or e-mailed to you.

SN-ALLOY2-XXXX-XXXX-XXXX-XXXX

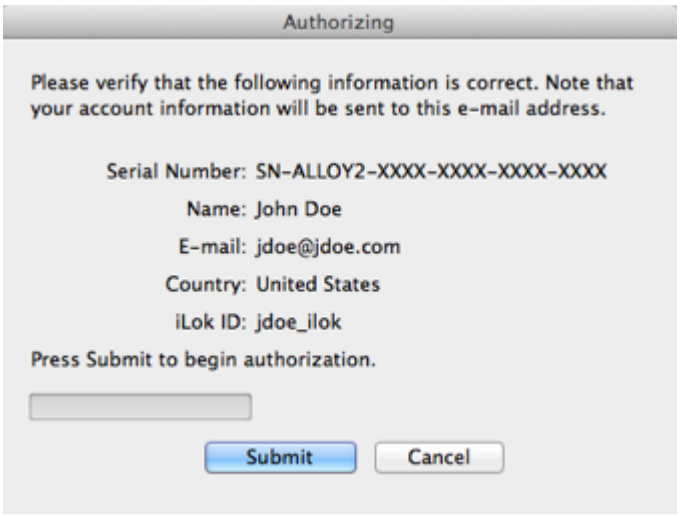
3. You must also enter your name and a valid e-mail address.

Make note of the e-mail address you use to authorize your license. Your license and iZotope account will be linked directly to this e-mail address.

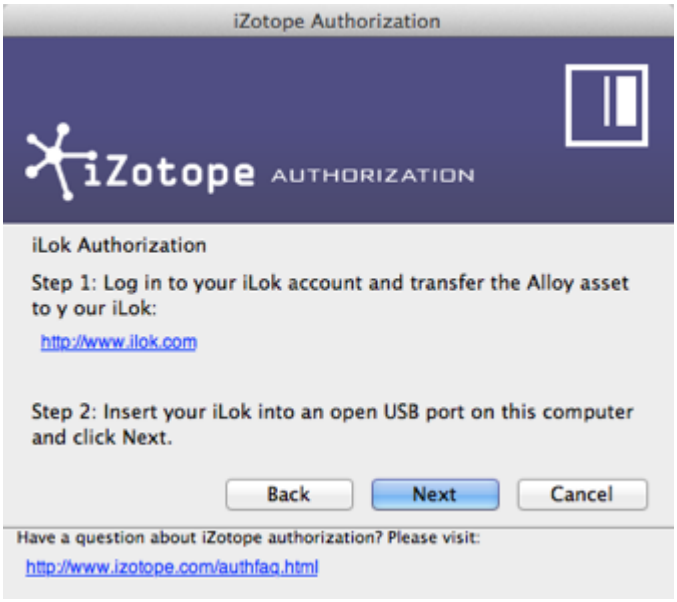
4. Select 'Use iLok Authorization' and enter your iLok ID.

5. When you have confirmed that all your information is accurate, click once more on 'Authorize'.

6. Lastly, click on 'Submit' in order to send your authorization message to the iZotope servers.

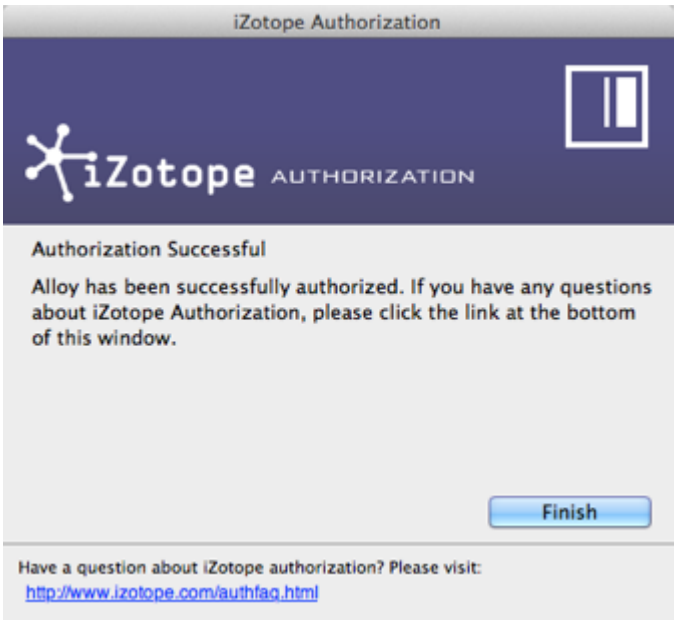


7. You will now be instructed to log in to your iLok account and transfer your Alloy 2 license to your iLok.



8. When you have completed this step and have your iLok connected to the computer on which you want to use Alloy, click 'Next'.

9. You should now receive a message that your authorization has been successful and may click Finish to begin using Alloy 2.



Help

We have created an online article to help with common questions about our authorization system.

Removing Your Current Authorization

Use the authorization menu in Alloy's General Options panel to remove your current Alloy authorization.

What is Alloy?

A Complete Channel Strip

Alloy was designed to give you the essential mixing tools you need for every project in a self-contained interface. Alloy combines six key processors that let you precisely shape the sound of your tracks and busses. Smooth out vocals or slam your drum buss with a Dynamics section that combines the best characteristics of analog and digital compressors. Add body or take the edge off with an 8-band Paragraphic EQ. Take the bite out of harsh vocals and cymbals with a smooth, transparent De-Esser. Add tube and tape-like warmth, or even a little grit, with the Exciter. Give percussive sounds more snap or less "room" with the Transient Shaper module. And keep peaks under control, or pump up the volume, with the Limiter. Alloy gives you forward thinking features like a fully customizable signal chain, an adaptive Overview Window, dual compressors that work in parallel or series, and single- and multi-band side chaining complete with sidechain filters.

Key Features in Alloy

- Six essential tools: Equalizer, Exciter, Transient Shaper, Dynamics, De-Esser, and Limiter
- Analog-modeled digital processing algorithms
- Advanced multi-band sidechaining support
- Elegant, highly efficient user interface
- Extensive metering and spectrum analysis tools help you get better results

- Over 150 new presets designed by professional engineers
- Integrated undo history with comparison tools
- User-definable signal routing
- Zero Latency operation mode
- Extensive automation support
- CPU-efficient and optimized for today’s low-latency DAW environments
- Supports sampling rates up to 192kHz

Highest Audio Quality

All modules within Alloy use highly optimized audio signal processing to achieve the highest resolution and sound quality possible. All of the modules in Alloy are designed to work together seamlessly. In addition, the sound quality and characteristics of each of the modules is tuned to complement the others, providing consistent and high quality results.

Alloy uses analog modeling to give each of the modules a smooth natural sound. For example, the Equalizer recreates the soft limiting exhibited by a vintage valve equalizer, while the Exciter mimics the "musically pleasing" harmonic saturation of vacuum tube components, tape, and other analog processors. Alloy’s compressor can deliver the smooth release characteristics of vintage optical compressors, or the more crisp sound of later FET compressors.

Powerful Audio and Visual Feedback

We wanted to provide visual feedback wherever possible. Your ears and your eyes can be a powerful combination and each processing module is complemented with useful spectrums, meters, graphs, and level histograms.

We also wanted to make it easy to keep track of changes you've made to your audio by providing extensive solo/bypass controls and histories with functions for A/B comparisons. The Alt-click function on the EQ is an example of this as well. Wherever possible, we wanted to give you ways to hear and see what you are doing.

Intuitive Design and Easy to Use

We've made Alloy 2 as easy to use and intuitive as possible by including a complete set of mixing tools in a single plug-in system, context sensitive help, and little things like mouse wheel support. There is a lot of power in Alloy 2, but in no time at all you'll be getting great results with ease. Whether you're a seasoned professional or you're simply looking to take your productions to the next level, Alloy 2 is your complete mixing solution.

Alloy's interface is made up of two distinct sections: a hardware "faceplate" which is viewable in all states of the plug-in and a "touchscreen" which adapts to the selected module you are working in. The "faceplate" portion of Alloy is always accessible and allows you to switch between the various modules within Alloy, access the Overview Panel, open the Global and Module preset menus, bypass the plug-in, as well as adjust input and output levels with the included meters.

The "touchscreen" portion of Alloy updates to feature the controls for the currently selected module. From the touchscreen you may access the various mini-spectrum window views for the selected module, switch between single and multi-band processing modes (available in the Transient Shaper, Exciter, and Dynamics modules), and access the standard module controls which are viewable in all states of Alloy.

New Features in Alloy 2

If you're moving up from Alloy to Alloy 2, we thank you for your continued support! Here are some changes and new features that you'll find in Alloy 2!

New Intelligent Workflow

New Adaptive Overview Screen

The Overview Screen provides efficient control over the most accessed controls of every module within Alloy. The Overview screen's layout will adapt to feature only modules enabled at any given time.

Updated Interface

Alloy has been redesigned with a larger interface to make even more controls accessible in one window. For example, the Dynamics modules now feature "Show All Bands" modes, from which you can view and adjust all relevant settings for each band of every dynamics stage in a single window. These updates allow for a more seamless workflow when performing multi-band processing and streamline tasks that can be arduous in other plug-ins.

Module Presets

Alloy 2 has been updated with the added functionality to load and save presets for individual modules. You may apply settings to one module then mix and match presets from different modules to better address the needs of your mix.

Internal Meter Tap

Alloy 2 will now act as a Meter Tap within your session allowing it to send level data to Ozone 5 Advanced's Spectrogram. Place Alloy 2 on every track or bus in your session, name each instance of Alloy 2 accordingly and Ozone 5 Advanced's Spectrogram will allow you to easily view and highlight any track or bus in your session.

New Processing Innovations

Redesigned Exciter

The Exciter module features more natural sounding modes allowing you to add both subtle saturation as well as pronounced grit to your signal. An added post filter allows you to sculpt the frequencies output by the Exciter.

New Transient Shaper

The Transient Shaper module has been completely reworked to be better-sounding and easier to use. Additionally, the module features all new metering that highlights the ways the Transient Shaper affects your audio.

Added EQ Filters
Alloy's Equalizer features new filter shapes like flat and brickwall pass filters, vintage shelf and bell filters, as well as treble and bass Baxandall filters which are known for their gentle slope.

Unlinked Stereo Limiting
Alloy 2 now allows you to limit the left and right channels independently for more transparent limiting that doesn't narrow the stereo image.

Sidechain Filter
Alloy 2's Dynamics modules allow you to apply both a resonant high and low pass filter to your sidechain input signal giving you added control of what frequencies trigger the Dynamics modules' detection circuits.

Getting Started

Using Presets in Alloy 2

Alloy's presets are designed to give you a quick starting point for your own projects.

Every track is different, so no single preset will always work for your audio. Knowing this, we have provided a wide range of presets that will help you determine a good starting point for your own material. By starting with a preset and adjusting the controls accessible from the Overview Panel, you'll be able to customize Alloy 2 to more closely fit the needs of your session. If you want more advanced control of any of Alloy's modules, you can go deeper by clicking on any of the module selection buttons at the bottom of the interface to get to even more controls.

Presets can take you a long way, but learning how each of Alloy's modules works is the key to getting the best results.

Setting Your Input Level

Setting the input level in Alloy can make a huge difference in how the Dynamics modules behave. Setting your input level is important when selecting presets as the presets will sound drastically different if your input level is too loud or quiet.

As a starting point try setting Alloy's input level so that the input meter is peaking in the yellow area of the meter. It is OK if the input meter occasionally goes into the red when Alloy's Limiter is enabled, it will keep the audio from clipping.

Choosing a Starting Point

Start by listening through several of Alloy's presets. We've organized presets into categories that will let you search easily for presets for every purpose. Because every mix is different, we've aimed to give you a lot of starting points so that you can choose the best one for your project. When you've found one that sounds like it has what your track needs, you can start tweaking that preset to your liking.

Alloy Modules
Overview Panel

The Overview Panel provides efficient control over the most accessed parameters of all of the modules within Alloy. The Overview Panel layout will adapt to feature only modules enabled at any given time.

Key Features

- Quickly view and adjust enabled modules
- Easily monitor all settings while you demo presets
- Adapts to single- and multi-band processing

The Overview Panel gives you instant access to the most relevant settings in every module within Alloy 2. Only enabled modules are displayed giving you a refined overview of which modules are processing at any given time. The following module controls are accessible in the Overview Panel:

EQ

Within the EQ section of the Overview Panel you have the ability to interact with all enabled nodes from the EQ module. The Equalizer section also features a spectrum analyzer. Learn more about interacting with these EQ nodes in the EQ Module section.

Transient Shaper

The Overview Panel allows you to easily view and adjust the amount of transient shaping done within the module. Learn more about the settings described below in the Transient Shaper Module section.

Attack and Sustain

Set the gain for both the attack and release portions of transients in your audio

Band Selection

Click on the band numbers below the attack and release sliders to view and adjust the settings for the corresponding crossover band when the module is in multi-band mode.

Linked Bands Control

Click on the link icon next to the band selection buttons to link all band controls. When the bands are in linked mode, the Attack and Release sliders will affect the settings of all bands proportionately.

Exciter

The Overview Panel allows you to instantly adjust the amount of saturation applied by the Exciter module. Learn more about the settings described below in the Exciter Module section.

Drive

Set the amount of harmonic excitation applied by the Exciter

Mix

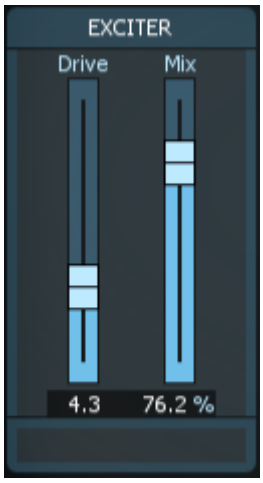
Control the mix of the Wet (processed) signal with the Dry (unprocessed) signal

Band Selection

Click on the band numbers below the Drive and Mix sliders to view and adjust the settings for the corresponding crossover band when the module is in multi-band mode.

Linked Bands Control

Click on the link icon next to the band selection buttons to link all band controls. When the bands are in linked mode, the Drive and Mix sliders will affect the settings of all bands proportionately.



Dynamics

The Overview Panel allows you to instantly adjust the most commonly adjusted settings within the Dynamics modules. Learn more about the settings described below in the Dynamics Module section.

Module Selection

Click on the Dynamics 1 and Dynamics 2 tabs to toggle between viewing and adjusting Alloy's two Dynamics modules.

Threshold Control

Control the threshold of both the compressor and gate stages of the Dynamics module while monitoring the level of the incoming audio and the amount of gain added or reduced by the dynamics process.

Sidechain Indicator

Indicates when the Dynamics modules are being triggered by a sidechain input.

Gain and Mix Controls

Set the amount of gain going into the Dynamics module and the mix between the wet dynamically processed signal and the dry unprocessed signal.

Compressor and Gate Controls

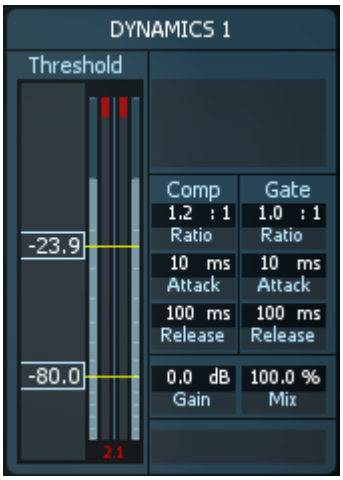
Instantly view and adjust the Ratio, Attack, and Release for both the Compressor and the Gate stages of the Dynamics modules.

Band Selection

Click on the band numbers below the Gain and Mix controls to view and adjust the settings for the corresponding crossover band when the module is in multi-band mode.

Linked Bands Control

Click on the link icon next to the band selection buttons to link all band controls. When the bands are in linked mode, the Dynamics controls will affect the settings of all bands proportionately.



De-Esser

The Overview Panel allows you to instantly adjust the amount of de-essing applied by the De-Esser module. Learn more about the settings described below in the De-Esser Module section.

Threshold Control

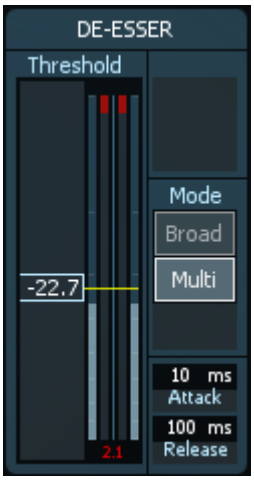
Control the threshold of the De-Esser while monitoring the level of the incoming audio and the amount of gain reduced by the de-essing process.

Mode

Set whether the De-Esser is operating in Broadband or Multi-band mode.

Attack and Release

Instantly view and adjust the Attack and Release times used by the De-Esser module.



Limiter

The Overview Panel allows you to instantly view and adjust the most relevant settings in the Limiter module. Learn more about the settings described below in the Limiter Module section.

Threshold Control

Control the threshold of the Limiter while monitoring the level of the incoming audio and the amount of gain reduced by the limiting process.

Mode
Set whether the Limiter is operating as a Hard or Soft limiter.

Margin
Adjust how much to boost the output signal after limiting.

Release
Instantly view and adjust the release time used by the Limiter module.

Standard Module Controls

At the bottom of each of the module's touchscreen is a navigation bar that includes a set of buttons and controls. The function of these controls is the same regardless of which module you are using.

Reset Button: Resets the control to its default value . For most modules, this means setting the values of controls in the displayed module to zero or their default states.

History: Clicking on the History button brings up a window which shows a history of the operations that have been performed. You can undo a single operation or sequence of operations and assign setups to keyboard shortcuts for A/B/C/D listening comparisons.

Module Presets: Load and save presets for individual modules to mix and match different modules' settings to better address the specific needs of your mix. Launch each module's individual preset manager by clicking on the Module button under Presets in the bottom right corner of Alloy's faceplate.

Solo: Clicking the Solo button turns off (bypasses) all the modules except the one currently displayed. This allows you to audition the effect of one module without hearing the effect of the others. If you change screens by selecting a different module, the solo will be automatically turned off so that you can work immediately on the new screen and hear the effect (without worrying about whether a screen that isn't displayed is being solo'd).

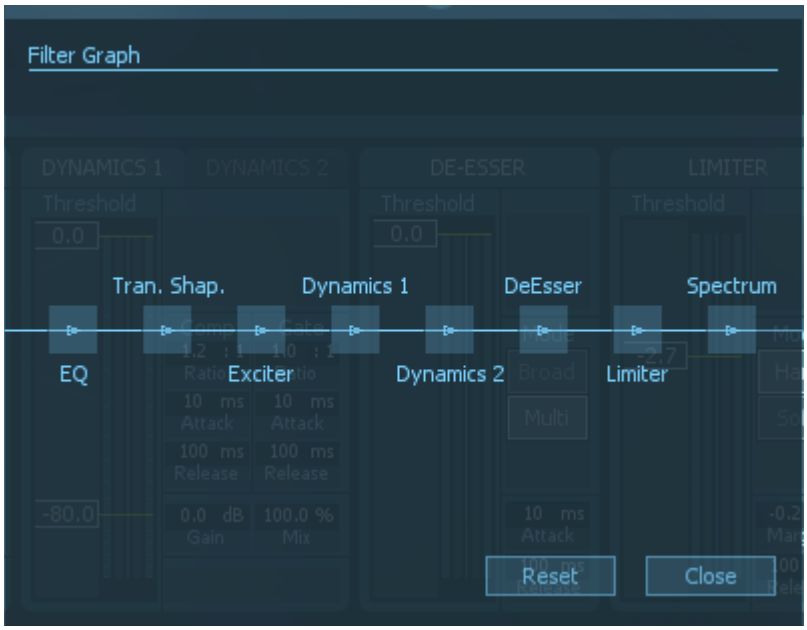
Bypass: Clicking the Bypass button turns off the processing within the currently displayed module. This allows you to compare the sound with or without the processing of the currently displayed module. Unlike the Solo button, if you change screens by selecting a different module the bypass will still apply. This allows you to bypass more than one module.

Note: You can also bypass modules by clicking the Active light on the Alloy faceplate as shown below. You can solo a module by holding down the Alt key and clicking the Active light for the module you wish to solo.

Graph: The Graph button reveals the order in which Alloy processes audio through the main modules. Here is the default order of signal processing through Alloy's modules:

- Equalizer
- Transient Shaper
- Exciter
- Dynamics

- De-Esser
- Limiter



Clicking on the Graph button also allows you to change the order of processing, and insert the spectrum at any point in the signal path. You could, for example, view the spectrum before the EQ or after the Dynamics but before the Limiter. By default, the spectrum is based on the final output signal (the readout is the signal after all processing).

Alloy's Global and Module Input/Output Gain stages are fixed by design.

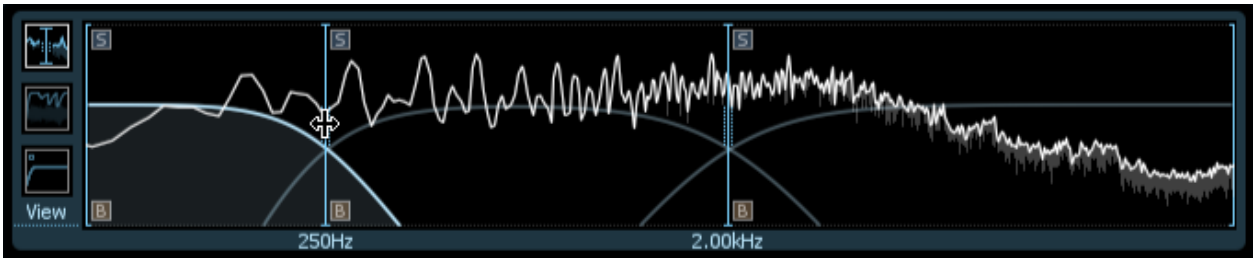
Options: Opens the Options screen which lets you customize the behavior of meters and set other properties.

(?): Opens the Help file to the specific page or topic that relates to the module you are currently in.

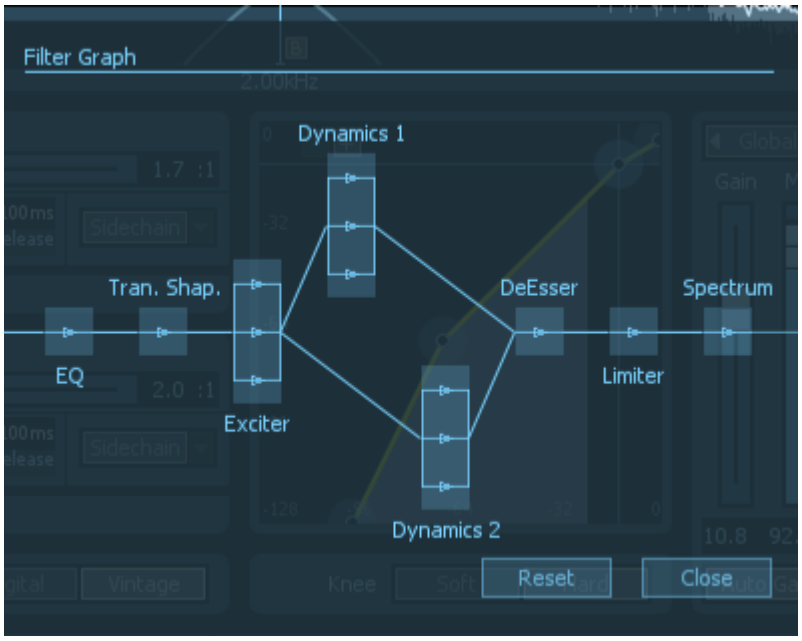
Slider Compare Feature: You can Shift+Click on any slider in Alloy to quickly A/B the changes that have been made to that slider. This works for all sliders on the touchscreen.

Using Multi-band Modules

The Dynamics, Exciter, and Transient Shaper modules in Alloy can be configured as multi-band which allows you to apply processing to up to 3 bands individually. The ranges (or cutoffs) of these three bands are shown at the top of the multi-band modules with up to two vertical blue lines. You can adjust the cutoffs by dragging the cutoff lines to the left or right with the mouse.



Note: Having all modules operating in multi-band mode with the same crossover settings results in much better sound quality, as the multi-band filters are always aligned and in phase.

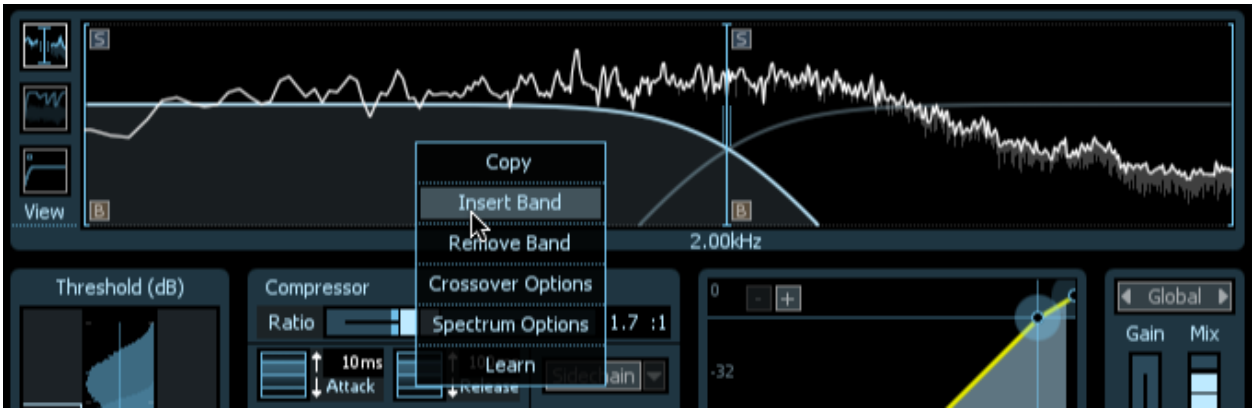


Bypass a Band You can bypass the processing for a specific band (or bands) by clicking on the box labeled "B" in the lower left corner of the band. This allows you to hear the audio within that band, but without any processing.

Solo a Band You can Solo a band by clicking on the box labeled "S" in the upper left corner of the band in the Crossover View. This allows you to adjust multi-band processing by hearing only the audio within the selected band.

Change the Number of Bands You can choose to split the audio into 1, 2, or 3 bands. For subtle compression or when working with solo instruments, less bands can sound smoother as there is less processing required for the audio. The other benefit is that less CPU is required when working with fewer bands. To add or remove bands, right-click (you can also control-click in OS X) on the mini-spectrum and select "Insert Band" or "Remove Band" as

shown below:



Note: You may also adjust the number of crossover bands within each multi-band module's Options page.

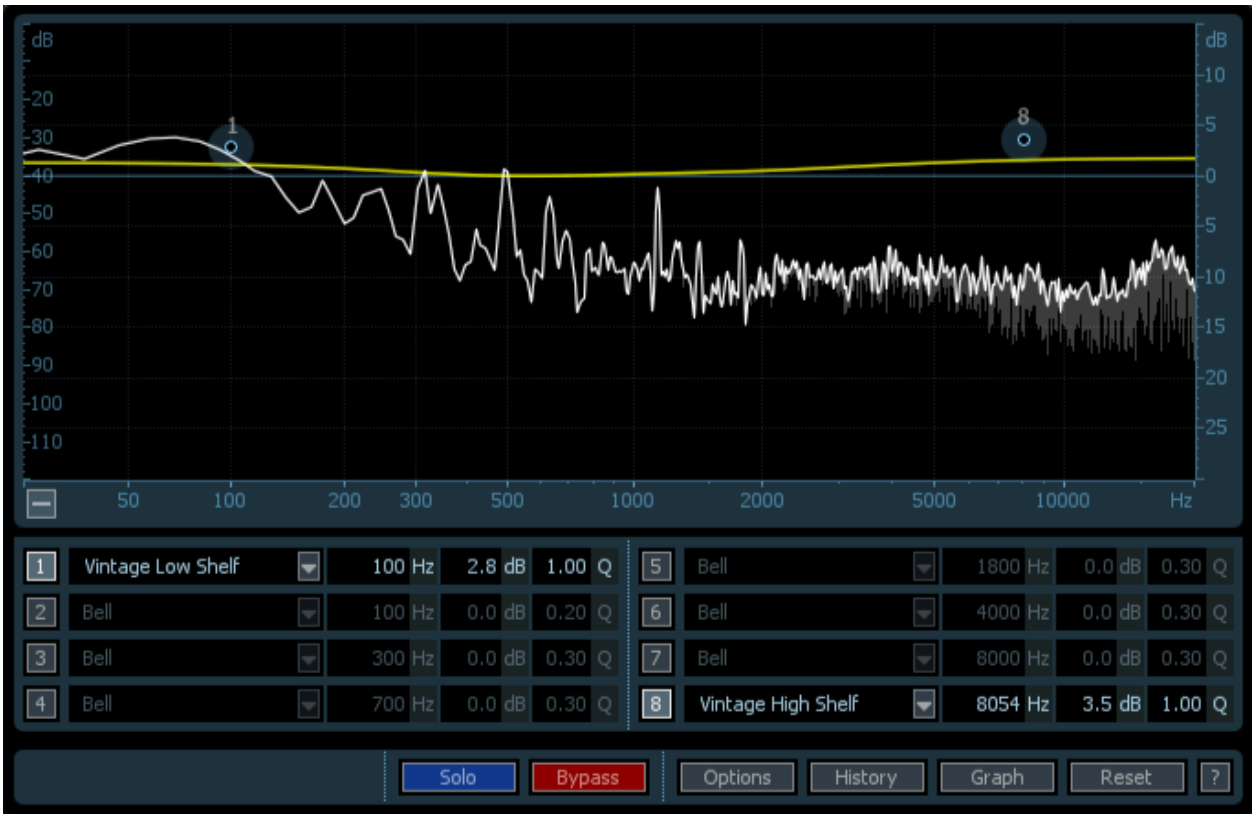
Copy and Paste Settings Across Bands Using the same right-click menu, you can copy settings from one band and apply them (paste them) to another band. This is helpful, for example, for duplicating settings across bands in the multi-band dynamics module or copying your single band settings and pasting them across all bands within a modules multi-band mode.

Equalizer

Alloy's versatile EQ allows you to add warmth and character with analog matched filters. Alloy 2 adds a range of new filter shapes, including Baxandall Treble and Bass, which allow you make more complex boosts and cuts with less EQ nodes.

Key Features

- Eight bands of bell, high-pass, low-pass, high-shelf or low-shelf filters
- Analog or Vintage-style filter shapes
- Fully configurable spectrum analyzer
- New Baxandall and Analog Bell Filter Shapes

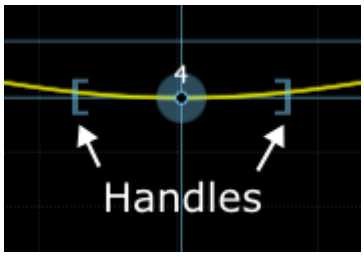


Frequency and Gain

The green circles mark each of the eight EQ nodes. You can adjust an EQ band by clicking on a node and dragging the crosshairs to change the frequency and gain of the band. You can also use the arrow keys to adjust a selected band, or the Shift key in combination with the arrow keys to adjust in larger increments.

Q/Bandwidth

If you move the mouse over the "handles" on the side of the band, you can adjust the Q or bandwidth of the EQ by dragging with the mouse and widening the band. If you have a wheel mouse, you can use the mouse wheel to widen/narrow a selected band.



Selecting Filter Shapes

Alloy provides the ability to set the type or shape of any of the eight EQ nodes. Any node can be a lowshelf, lowpass, bell, highshelf or highpass filter. A number of new filters are available:

Flat Lowpass/Highpass – These are Butterworth filters; optimized for maximum flatness without ripple or resonance in the passband or stopband.

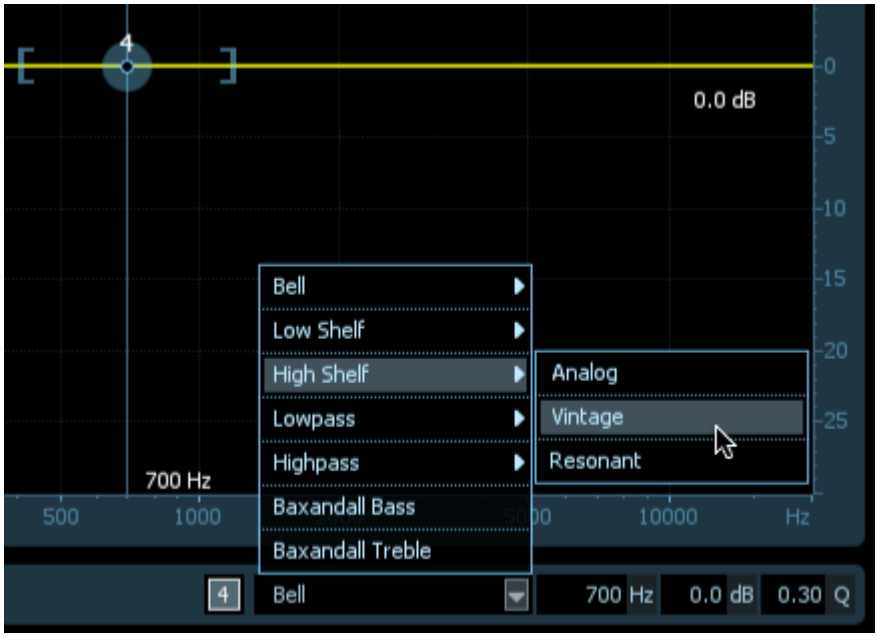
Brickwall Lowpass/Highpass – These are elliptic filters; optimized for steepness with minimal ripple in the passband and stopband.

Vintage Lowshelf/Highshelf – These high and low shelf filters exhibit a complimentary frequency dip modeled after the renowned Pultec analog equalizer creating a complex slope with one node.

Resonant Lowshelf/Highshelf – These high and low shelf filters exhibit a complimentary resonance at both ends of the filter slope creating a complex shape with one node.

Vintage Bell - This is an asymmetrical bell filter that is more narrow when cutting frequencies than when boosting frequencies

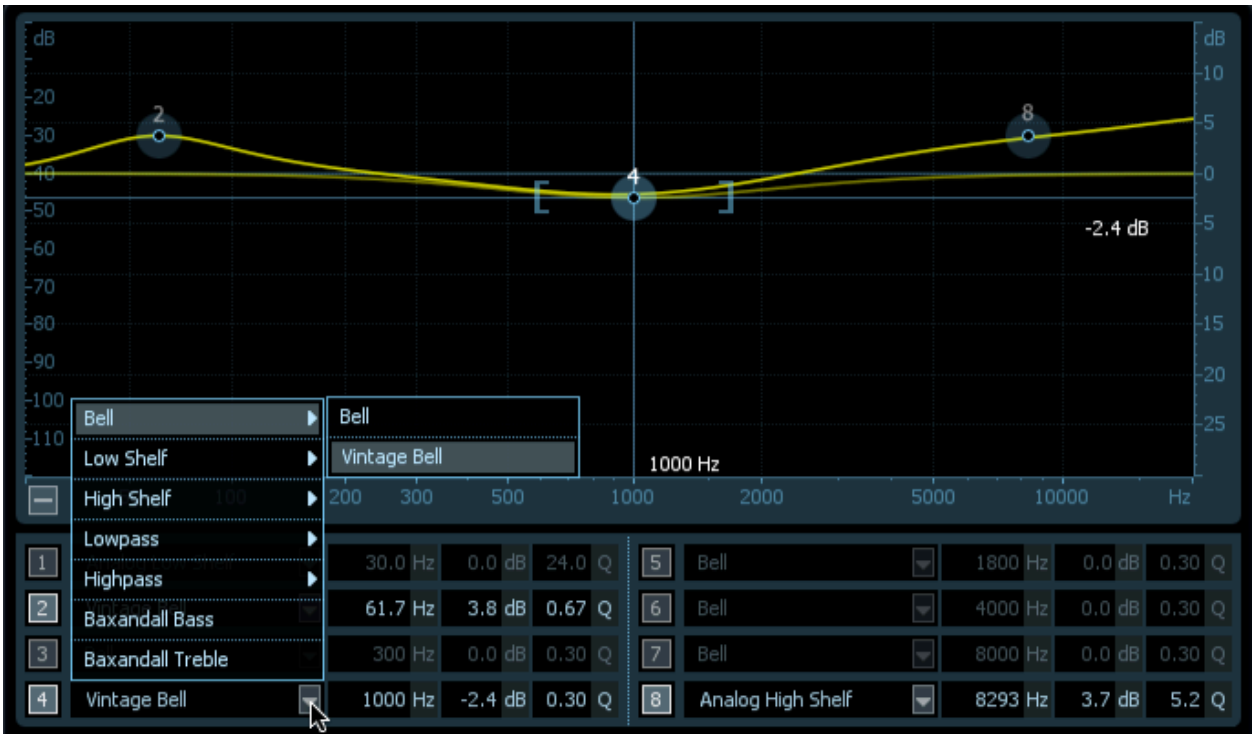
Baxandall Bass/Treble – These filters are based on a vintage equalizer designed by Peter Baxandall that originally had just two knobs: "treble" and "bass". The Baxandall EQ curves are known for their gentle slopes which are sonically pleasing. Unlike the original Baxandall EQ design which had no frequency control, Alloy's Baxandall Filters allow you to freely adjust frequency.



To change the shape select a node and click on the drop down menu in the bottom right or simply right-click the node. To worked in the expanded info view, click on the "+" button.

From this table, you can specify a different filter shape for each node. If you had selected a node in the main screen before opening the expanded screen, that node is shown as selected in the table (i.e. Node 5 has brackets around it, indicating that this was the EQ node that is currently selected.

Note that you can also use the dialog boxes to enter values for the EQ bands directly. You can also disable bands with this table by clicking on the square number box to the left of a band in the table.



Visuals

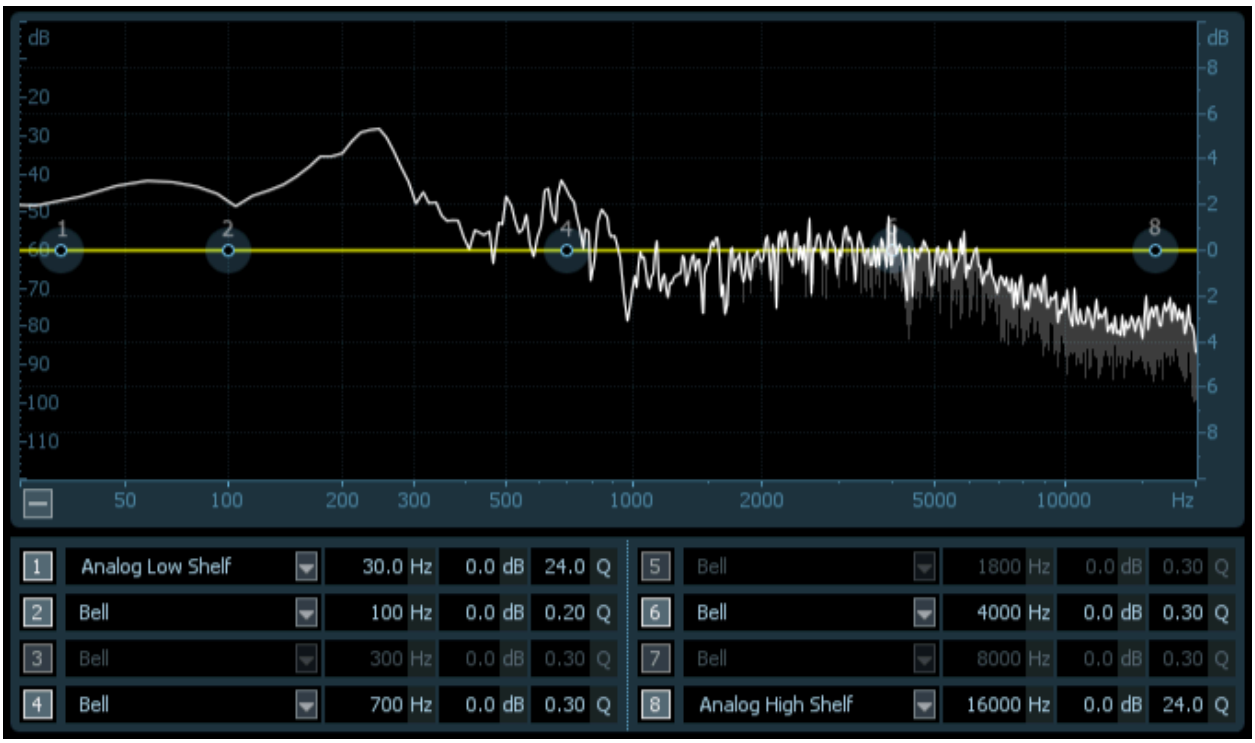
As you adjust a band you will see two EQ curves. The bright red curve is the composite of all EQ bands while the darker red curve shows the EQ curve of the selected band.

Spectrum Overlay

A spectrum by default is overlaid on the EQ module for visual feedback of the incoming audio. You can turn off the spectrum to conserve CPU or if you just don't want to see it using the Options screen. You can also set options such as average or real time spectrum,

show peak spectrum, etc. These are available in the Spectrum Options screen.

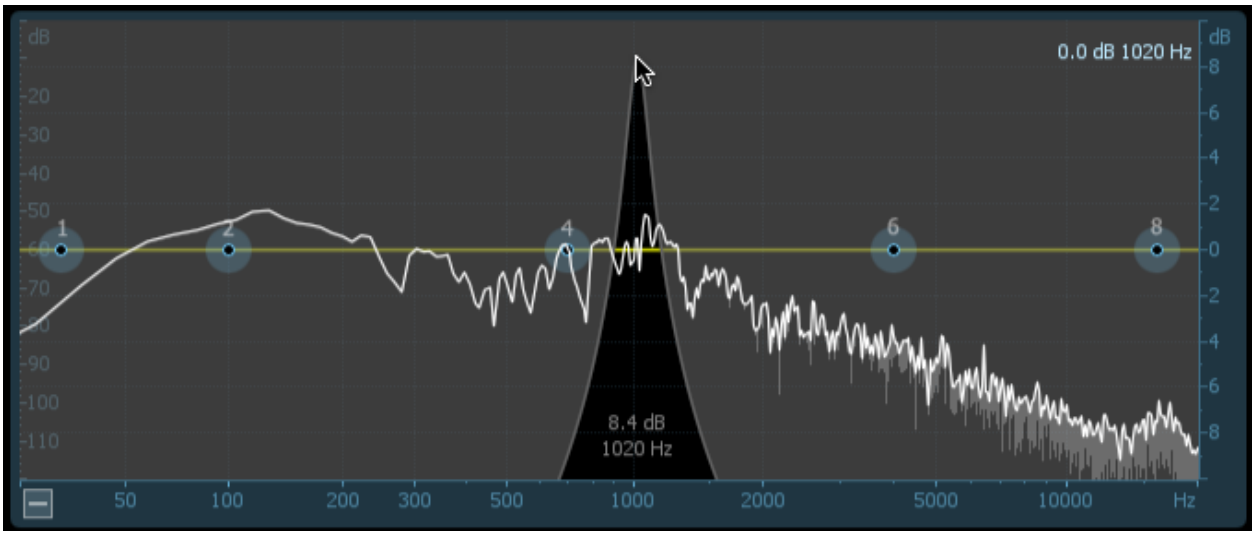
On the right you'll see the gain scale for the EQ. This will change as you zoom the EQ in or out. On the left you'll see the scale for the spectrum. On the bottom you'll see the frequency scale which applies to both the EQ and the spectrum.



Note: The scales for the EQ and spectrum are different, by design. If they were made to match, you wouldn't see enough of the spectrum for it to be useful.

The Alt-Solo Feature

If you hold down the Alt key and click on the spectrum, you have an "audio magnifying glass" that lets you hear only the frequencies that are under the mouse cursor, without affecting your actual EQ settings. This is useful for pinpointing the location of a frequency in the mix without changing your actual EQ bands. Releasing the mouse button returns the sound to the actual EQ. You can set the default bandwidth of this filter in the Options screen under "Alt-Solo Filter Q" or simply use your mouse's scroll wheel. Once you've pinpointed a particular frequency using the Alt-Solo feature, double-click that area to activate a new node in that exact location.



Additional Tips using Alloy's Paragraphic EQ

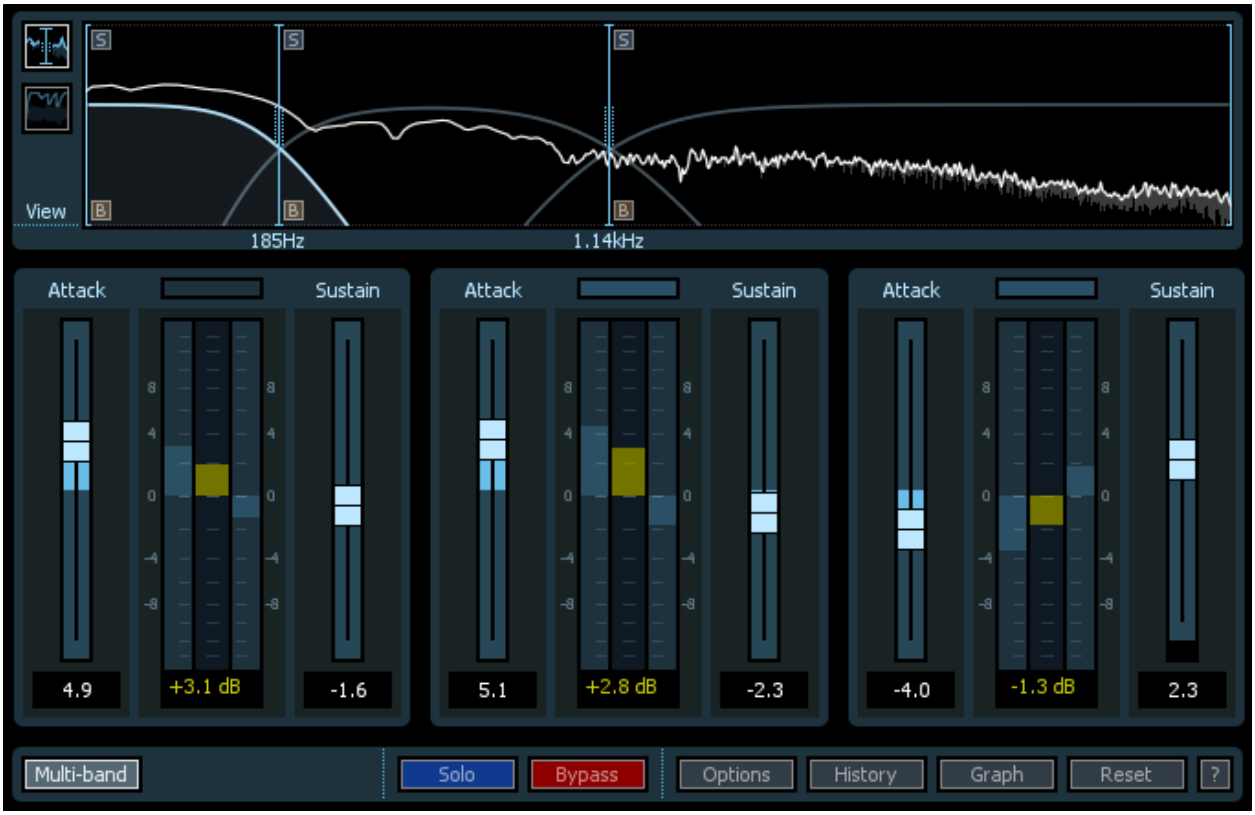
1. The Paragraphic EQ's scales are freely zoomable and scrollable, allowing you to focus on a specific frequency and dynamic range. While hovering over the dB meter on the right of the spectrum, you may use your mouse wheel to zoom in on a more focused dynamic range, then click and drag to scroll the dB scales. Additionally, while hovering over the frequency scales at the bottom of the spectrum, you may use your mouse wheel to zoom in on a particular frequency then click and drag to scroll the scales.
2. If you hold down the Shift key and drag an EQ node, the EQ band will be "locked" in the direction that you're dragging. So if you just want to change the gain without affecting the frequency (or vice-versa) just hold the Shift Key while you drag.
3. If you hold down the Ctrl key (Windows) or the Command key (Mac), you can click and select multiple bands. Once selected, you can adjust them as a group by clicking and dragging on any band you selected in the group.
4. If you'd rather enter specific values for each node rather than using the visual EQ bands, clicking on the "+" button gives you a table view of the EQ band settings. You can enter values for the EQ bands directly in this table. You can also disable bands with this table by clicking on the square box to the left of a band.
5. If you've chosen to display an averaging spectrum or a peak hold spectrum (using the Spectrum Options screen) you can reset the peak hold or the averaging by clicking anywhere on the spectrum.
6. Right click on the spectrum to to quickly access the EQ Options or the Spectrum Options screen.

Transient Shaper

The Transient Shaper module is especially useful for shaping percussive sounds. For example, it can be used to emphasize the stick attack of a snare drum sound, while de-emphasizing its body or room sound. Careful use of the Transient Shaper module can help a wide range of material sit differently in a mix, making it a powerful sound-shaping tool for any style of music.

Key Features

- Control over initial attack and sustain of audio with gain controls for each
- Integrated Gain Meter illustrates the effect of transient shaping on audio
- Single and Multi-band operation



Attack (Gain): Positive values will emphasize the attack of transients while negative values will decrease the attack

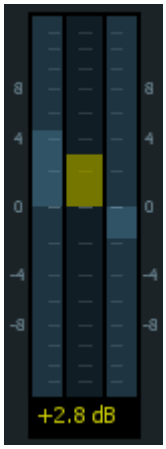
Sustain (Gain): Positive values will increase the sustain of transients while negative values will decrease the sustain

Visuals

Integrated Gain Meter

The Integrated Gain Meter shows gain added or reduced by the Transient Shaper for the attack stage on the left, gain added or reduced for the sustain stage on the right, and the sum of the two values in the center. When the overall level of the signal is being raised, the

center meter is drawn above the center point; when the level is being lowered, the meter is drawn below the center point.



Activity Indicator

The Activity Indicator illuminates when the Transient Shaper's transience detector perceives an attack in the incoming signal. Typically when using the Transient Shaper on drums, for example, the attack indicator will blink on with the beat. Periods when the Activity Indicator is not illuminated generally represent the sustain portion of the audio.

Additional Metering and Controls

Gain Trace View

The Transient Shaper's Gain Trace view is a scrolling meter that displays the incoming signal's waveform with superimposed curves drawn in real-time which represent the amount of gain being added or reduced by the Transient Shaper's processing. When using multi-band processing, the current selected band's gain curve is drawn imposed on a waveform of only that band's signal. The yellow curve represents the Attack's gain values and the white curve represents the Sustain's gain values.

Note: You may click on the Gain legend indicators "Attack" and "Sustain" in the bottom right to toggle on and off the drawing of gain reduction and addition of the attack and sustain portions of your audio.

Multi-band Mode

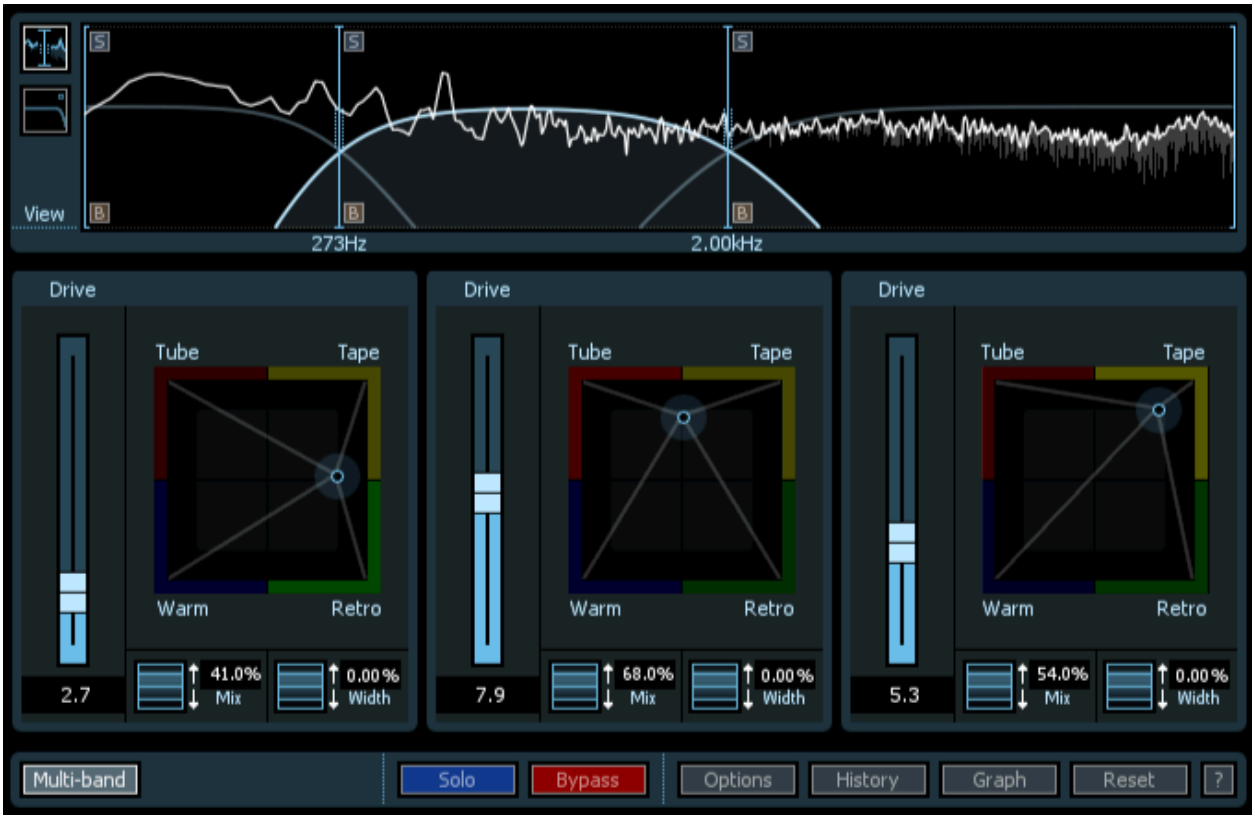
By clicking the Multi-band button in the bottom left corner of the touchscreen, the Transient Shaper will perform multi-band processing. Once enabled, the Transient Shaper's interface will update to display relevant controls for each crossover band.

Exciter

Harmonic exciters can give a sparkle or shine to the upper frequencies of a mix. They can also be used in mid and even low frequencies to add a boost or presence. Alloy 2's Exciter allows for more natural sounding saturation that can add subtle color or more pronounced grit to your audio.

Key Features

- X/Y Pad allows for mixing of various styles of saturation
- Saturation meter highlights affected frequencies
- Post filter sculpts the output of the exciter
- Single and Multi-band Mode



Exciter Saturation Types:
Tube: Tube saturation is characterized by its clear "tonal" excitation with an emphasis on dynamic or transient attacks.

Tape: Tape saturation can be recognized as a brighter sound due to the odd harmonics found in tape saturation models.

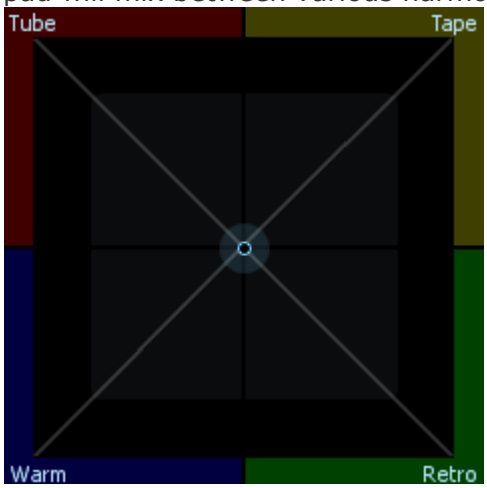
Retro: Retro saturation is based on characteristics of transistors with a slowly decaying row of odd harmonics.

Warm: The Warm exciter mode is similar to Tube, but is unique because it generates only even harmonics that decay quickly.

Exciter Controls

X/Y Pad

This versatile control allows you to selectively mix four types of saturation by clicking and dragging the node in the center of the X/Y Pad. Each corner of the pad will generate harmonics only associated with the corresponding saturation type. All other points on the pad will mix between various harmonics associated with the different types of saturation.



Note: You may right-click within the X/Y Pad to reveal editable values of the node's location.

Drive: Controls the amount of the harmonic excitation.

Note: As you increase the drive setting peak levels will subtly decrease. However, perceived loudness should remain constant.

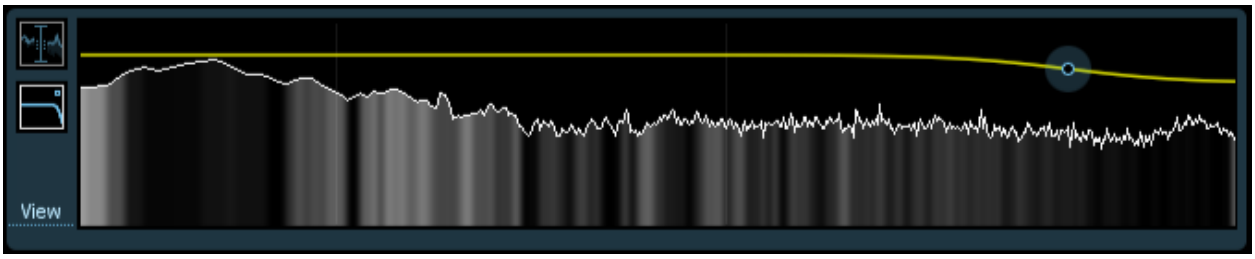
Mix: Allows you to control the mix of the excited wet signal with the dry signal.

Width: This control sets the amount of stereo widening for the saturated signal. Higher amounts provide more widening with -1.0 being mono and 1.0 being the widest stereo spread of the saturated signal.

Mini-Spectrum Window

The meter at the top of the module defaults to a display of the signal spectrum. However, with a selection on the left it may also display the Saturation Meter.

Saturation meter: displays the spectrum of the incoming signal while highlighting particular frequencies being affected by the Exciter. The spectrum is drawn with a solid black fill while the frequencies being affected by the Exciter are shaded in white. The saturation meter also features a post filter. The post filter is an adjustable high shelf filter that allows you to adjust the frequency output of the Exciter module. This filter will only affect the wet, excited signal as set by the Mix control.



Multi-band Mode

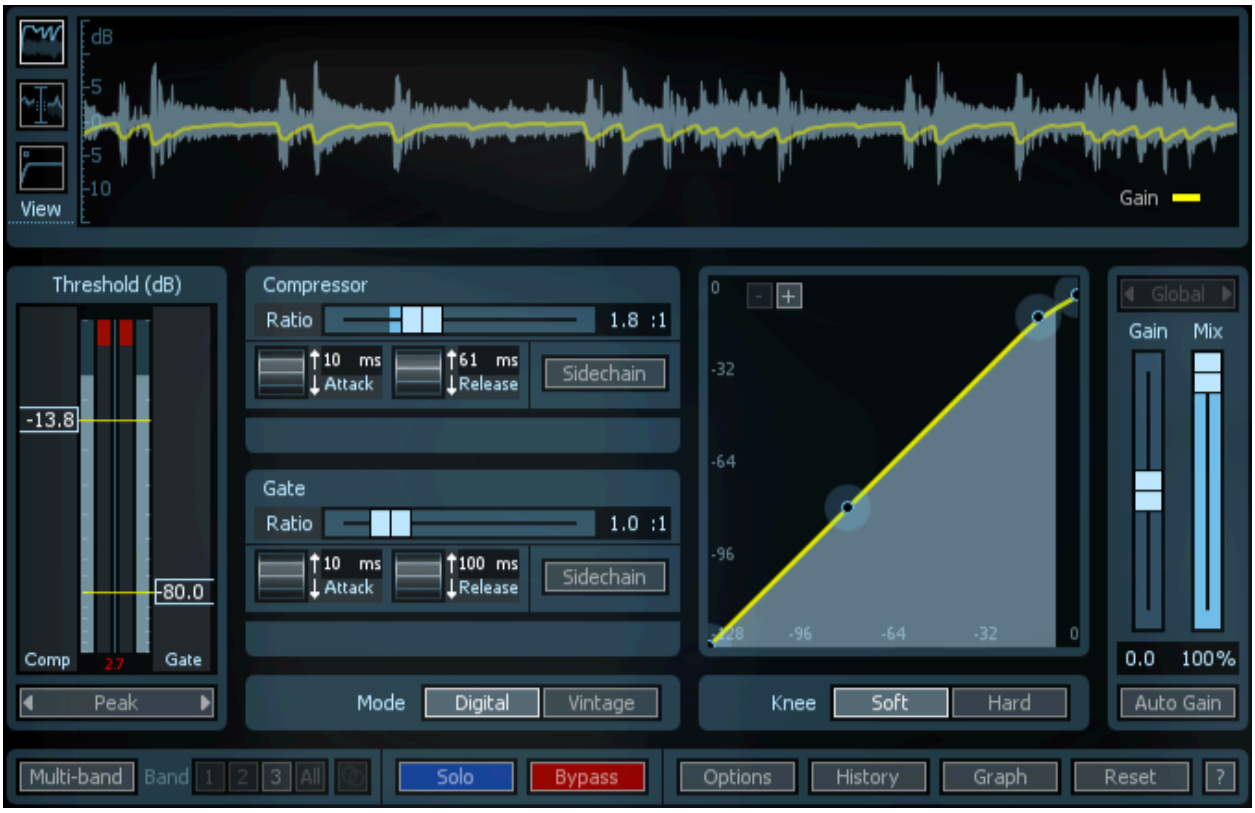
By clicking the multi-band button in the bottom right corner of the touchscreen, the Exciter will perform multi-band processing. Once enabled, the Exciter's touchscreen will update to display relevant controls for each crossover band.

Dynamics

One of most powerful modules in Alloy is the Dynamics section. You can use this module to shape the dynamics of your mix with up to three bands of compression and gating.

Key Features

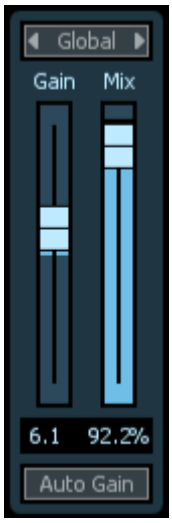
- Two independent Dynamics modules with Gate and Compressor stages that may be configured in series or in parallel
- Metering features including interactive Threshold Control with input/output gain reduction and histogram options, and the Gain Reduction Trace Meter
- Adjustable sidechain filter allows you to pinpoint the frequency band that will trigger the Dynamics module's processing



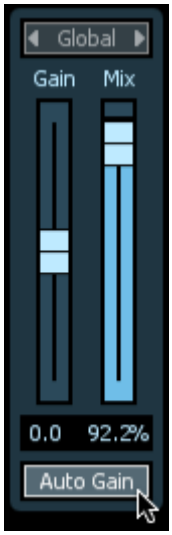
Band/Global: This toggles the Gain and Mix settings between "Global" mode and "Band" mode. Global mode affects the entire frequency range of your mix while band mode will only affect the frequency range of the currently selected band. Band mode is only selectable when the Dynamics module is processing in multi-band mode.

Mix: This is a wet/dry mix for the Dynamics module output. This is available for individual bands and/or globally for the entire frequency spectrum.

Gain: Adjusts the output gain of either the band or the entire module. This is useful, for example, after compressing or limiting a band to makeup the decrease in volume.



Auto Gain: When selected, Auto Gain compensation calculates RMS levels of both the input and output signals of the compressor for each crossover band and applies the appropriate gain to the output signal to compensate for the difference. This automatically brings audio levels to a level comparable to the unprocessed audio, and acts as a smart "make-up gain" control that adapts to the mix over time.

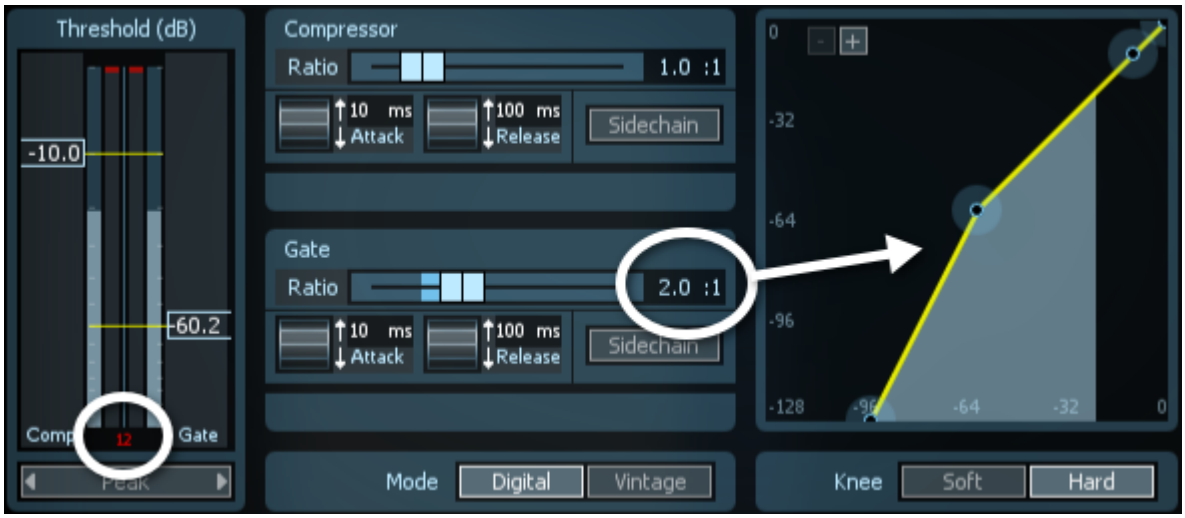


This is also a useful tool for A/B'ing various settings in the multi-band Dynamics module without having gain changes affect your perception.

Threshold: Set the point where the dynamics processing takes place. Both the Compressor and Gate within each of Alloy's Dynamics modules features a threshold.

Note: Please also see Routing Sidechain Signals in order to trigger Dynamics modules 1 and 2 from an alternate audio source.

Ratio: Sets the ratio for the Compressor. Higher ratios will result in more extreme compression or gating. The Gate and Compressor can have a ratio greater or less than 1.0. When the ratio is greater than 1, it is operating as a gate and any signals below the threshold will be decreased in volume. With a high positive ratio it can act as an effective multi-band noise gate, as shown below. With a ratio of less than one, upward compression is performed. This is discussed further below.



Attack and Release: Adjusts how quickly the dynamics processor reacts to the threshold. Attack determines how quickly the dynamic processor reacts when the threshold is reached. Release determines the amount of time before the dynamics processor returns the level to normal once the signal no longer reaches threshold.

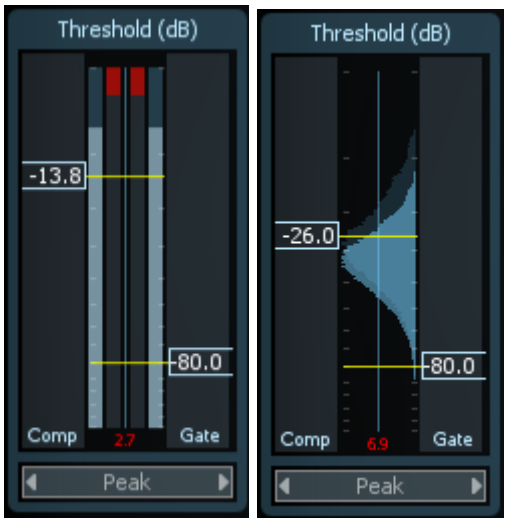
Note: Each section (Compressor and Gate) of each band can have its own Attack and Release settings.

Visuals

The Threshold Control

The Threshold Control is a meter that allows you to adjust the thresholds of the Compressor and Gate with sliders on the left and right side. Additionally, the Threshold control allows you to monitor how the incoming signal is being affected in real time.

The Threshold Control can display gain reduction as it is taking place with level meters. To enable the gain reduction meters, right- (or control-) click on the Threshold Control's meter window and select Dynamics options. From the Dynamics options page select Gain Reduction from the Threshold Meter drop-down menu. Two meters display the levels of the incoming signal and as gain reduction begins to take place, a gain reduction meter appears in red between the two level bars. The Threshold meter also displays the amount of gain reduction in real-time with a dB readout at the bottom.



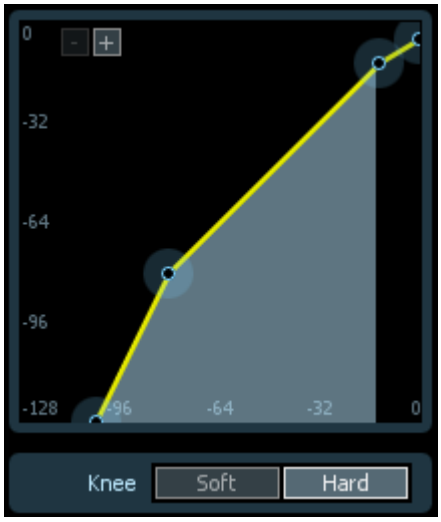
The Threshold Control can also display a Histogram, a history of level over time. To enable the histogram, right- (or control-) click on the threshold control's meter window and select Dynamics options. From the Dynamics options page select Histogram from the Threshold Meter drop-down menu. This allows you visualize the overall "level content" of the audio by providing a running display of the history of levels in the audio.

Learn more about gain reduction meters and histograms here.

The button at the bottom of the Threshold Control allows you to adjust level detection mode which is explained below.

Dynamic Curve Meter

The Dynamic Curve Meter shows the input signal (x axis) plotted against the output (processed) signal (y axis). More horizontal compression curves means the signal is being flattened (compressed) more. You can zoom in and out on the meter by clicking buttons in the top left.

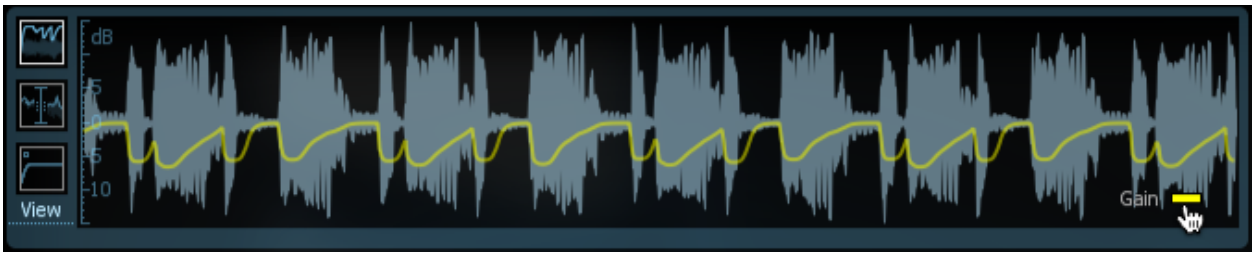


Nodes

The meter features individual nodes for the Compressor and Gate as well as nodes surrounding these that represent input and output. These nodes are linked to the Threshold and Ratio controls, and can be used to adjust the curve in a visual way, rather than setting them with the standard controls.

Additional Metering and Controls

Gain Trace: a scrolling meter that displays the incoming signal's waveform with a superimposed curve that illustrates the amount of gain reduction or addition taking place in real-time. To view the gain trace, click on the first mini-spectrum view button in the top left of the window. When using multi-band processing, the currently selected band's gain reduction is drawn imposed on a waveform of only that band's signal. The Gain Trace can help you to set attack and release controls appropriately and monitor the envelope of gain reduction and addition.

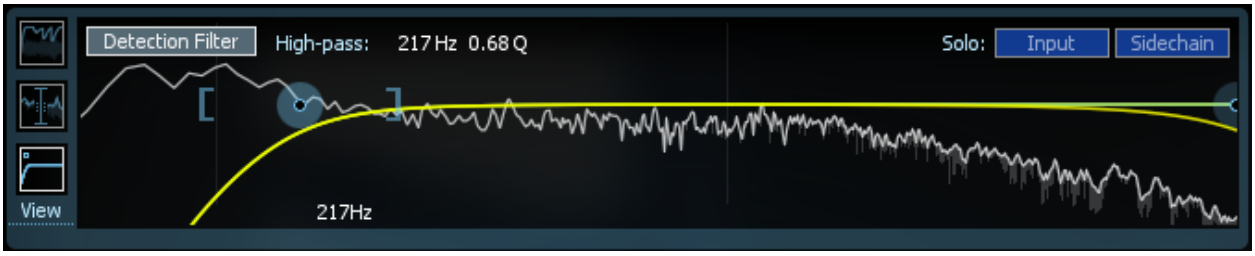


Note: You can adjust the scale on the left by hovering over it and using your mouse wheel. You may also click on the "Gain" legend indicator in the bottom right to toggle on and off the drawing of gain reduction and addition.

Detection Filter

Both of Alloy 2's Dynamics modules feature an optional Detection Filter with both resonant high- and low-pass filters. These filters allow you to adjust what each of Alloy 2's Dynamics module's detection circuits are responding to so that the dynamics process isn't triggered by certain frequencies or so the process may be weighted heavier on certain frequencies.

To enable the Detection Filter, select the third minispectrum view button in the top left of the window. Then, click the Detection Filter button which appears in the the top left.



Once enabled two nodes will appear which function much like the nodes in the EQ module. They may be dragged to adjust frequency and feature handles which allow you to adjust the Q. Alternatively, you may enter precise values for each by clicking on the node and entering values in the readouts at the top of the window.

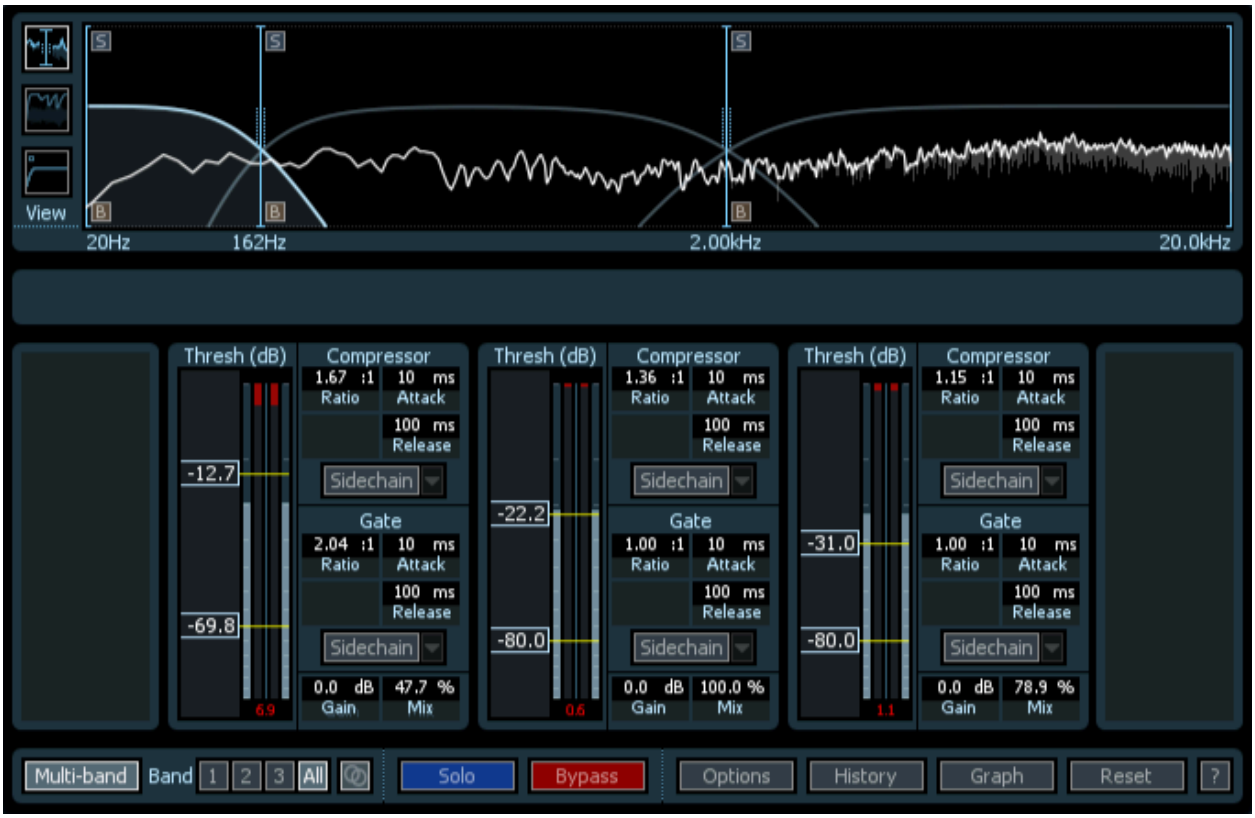
Multi-band Mode

By clicking the multi-band button in the bottom left corner of the module, the Dynamics module will perform multi-band processing. Each band has its own controls for controlling the dynamics. There can be up to three bands, as shown by the sections in the crossover view at the top of the window.
To select a band, click on its corresponding section in the multi-band spectrum or its corresponding band number in the bottom left of the window. The controls and dynamics meters will be updated to display feedback for the currently selected band.

Each band of dynamics is capable of two types of dynamics processing: gating and compression. This allows you, for example, to aggressively compress high level signals while applying a more gentle gate to the level of soft signals.

Show All Bands Mode

Alloy 2 allows you to view and adjust the dynamics settings for all bands in one easy to use window. Clicking the "All" button next to the individual band selection buttons reveals all the most relevant Dynamics controls for all currently enabled bands in one screen.



Linked Bands Mode: Selecting Linked Bands Mode allows you make changes across all bands by adjusting the settings of one band. To enable Linked Bands mode, click on the Linked icon to the right of the Band Selection buttons.

Additional Settings

Digital And Vintage Mode

Digital Mode

Digital Mode performs a more surgical form of compression that adheres strictly to the attack and release settings set using an unfiltered input signal to trigger the compressor's detection circuit.

Vintage Mode

Vintage Mode performs a more subjective form of compression that mimics the characteristics of classic analog compressors. The differences between Alloy's Digital and Vintage compression modes are outlined below.

Detection Circuit

In **Digital Mode** Alloy uses an unfiltered input signal (if the Detection Filter is not enabled) to trigger the compressor.

In **Vintage Mode** Alloy runs the input signal through an inverse equal loudness contour filter, which causes the compressor's detection circuit to respond to the input signal in a way similar to how our ears perceive loudness by being more sensitive to frequencies between 1-10kHz.

Attack Characteristics

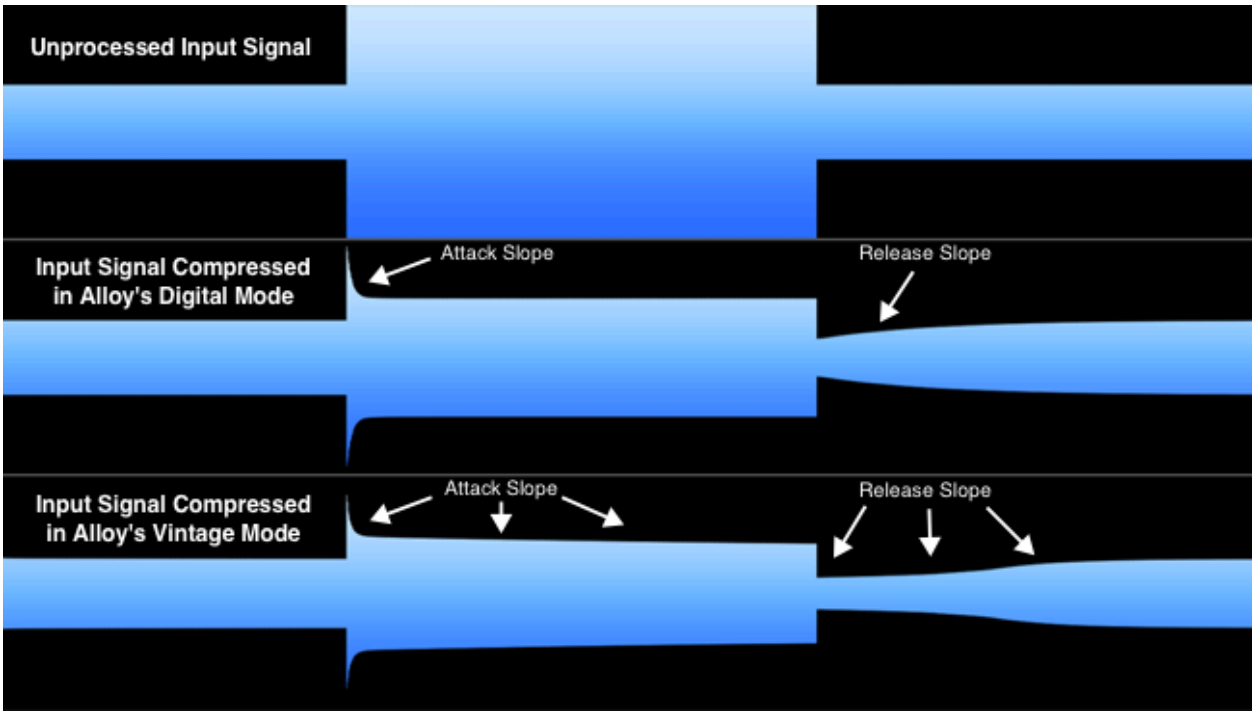
In **Digital Mode** Alloy's Compressor reacts to the threshold in the exact amount of time set in the Attack.

In **Vintage mode** Alloy's Compressor reacts to the threshold quicker initially while approaching the threshold level, then begins to ease in on an indefinite curve. This can give Alloy's compressor a punchier sound.

Release Characteristics

In **Digital Mode** Alloy's Compressor returns the level to normal once the input signal no longer reaches the threshold in the exact amount of time set in the Release.

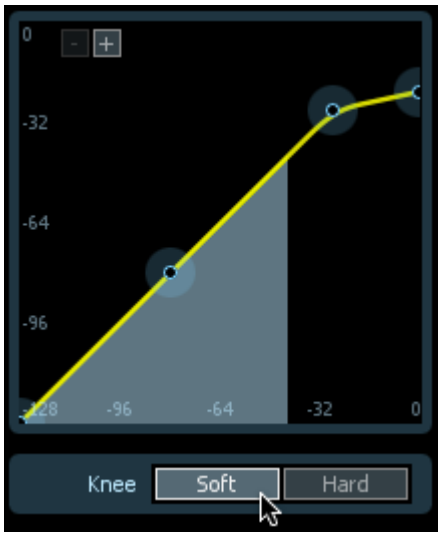
In **Vintage mode** Alloy's Compressor returns the level to normal once the input signal no longer reaches the threshold using an eased-in and eased-out slope. This can give Alloy's compressor a smoother sound.



Knee

Hard: As the signal passes the threshold, the compression ratio is immediately imposed upon the signal, effectively eliminating all bend in the knee. This transition can therefore become more noticeable, however also provide for quicker, more firm compression depending on the desired effect.

Soft: As the signal passes the threshold, the ratio will gradually increase until it reaches the value specified in the Ratio parameter. This therefore provides a gradual bend from the unprocessed signal to the specified ratio value, making this transition less noticeable and giving more transparent results.

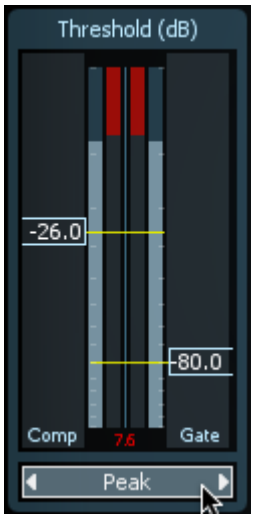


Level Detection

Below the Threshold Meter is a selection box which determines what levels the dynamics module's detection circuit looks at:

Peak: When this option is enabled Alloy acts as a peak compressor/limiter/expander. This means the detection circuit looks at peak levels of the incoming signal. In general this is useful when you're trying to even out sudden peaks in your music.

RMS: When this option is enabled, Alloy looks at the average level of the incoming signal. RMS detection is useful when you're trying to increase the overall volume level without changing the character of the sound.

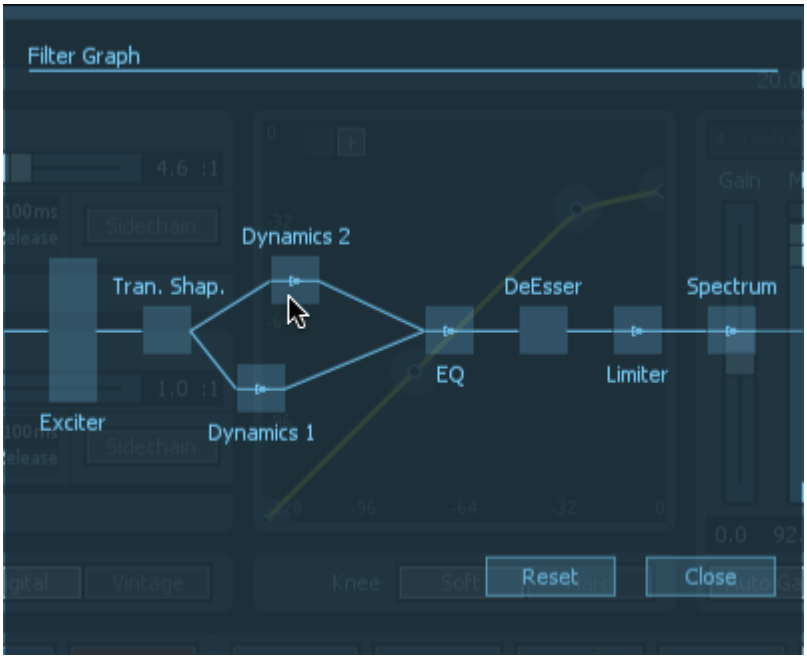


Parallel Processing

Instead of Alloy's Dynamics 1 and 2 modules running in series, one right after the other, with parallel processing enabled, the incoming audio will be split into two identical audio streams, each running independently into Dynamics 1 and Dynamics 2. This allows for two different compressors to act upon the incoming audio at the same time.

To turn Parallel Dynamics processing ON, simply open the Graph and click and drag one Dynamics module up and over the other.

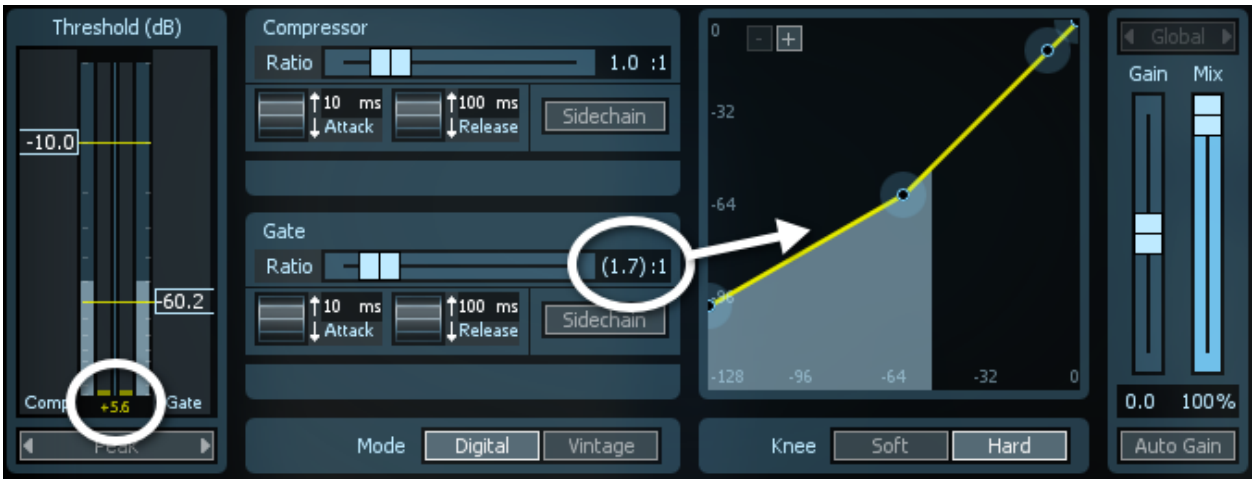
Dynamics 1 and 2 must both operate in either single band or multi-band modes. If both are in multi-band mode, each module must have the same crossover frequencies. This is done to maintain phase and high audio quality when working with this internal routing. Therefore, when you configure the dynamics modules in parallel, Dynamics 2 will automatically adapt to the settings of Dynamics 1. This will include whether Dynamics 2 is processing in single or multi-band and within multi-band processing, the crossover cutoff frequencies.



A benefit of parallel processing is that one Dynamics module can have very severe pumping settings in order to create the effect of heavy compression, while the other module only has very conservative settings. This will give your audio the sound of heavy dynamics processing without sacrificing your dynamic range entirely. This practice is often referred to as New York compression.

Upward Compression

Alloy's dynamics module now allows for ratios of less than 1:1 in both of the dynamics stages. At the gate and compressor stage a ratio of less than 1:1 performs upward compression. This raises the levels of anything that falls below the threshold. Upward compression can gently raise levels instead of pushing down peaks.

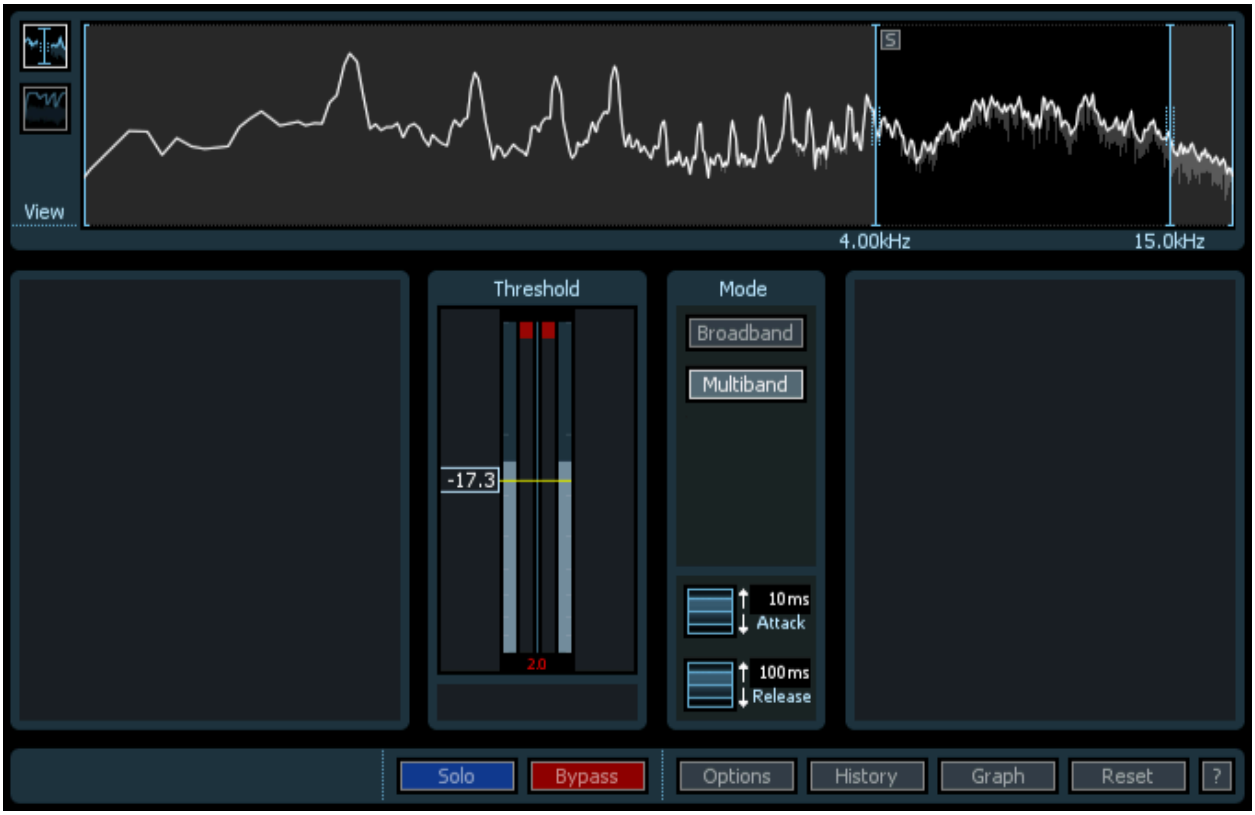

Threshold (dB)
-10.0
-60.2
Comp
+5.6
Gate
Peak
Compressor
Ratio
1.0 :1
10 ms
Attack
100 ms
Release
Sidechain
Gate
Ratio
(1.7):1
10 ms
Attack
100 ms
Release
Sidechain
Mode
Digital
Vintage
0
-32
-64
-128
-96
-64
-32
0
Knee
Soft
Hard
Global
Gain
Mix
0.0
100%
Auto Gain

De-Esser

Alloy's De-Esser is a powerful tool for controlling sibilance on vocal takes as well as other high frequency problems such as harsh cymbals and clanging guitars.

Key Features

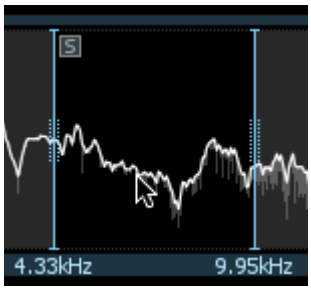
- Select range to de-ess with spectrum display
- Solo the de-ess band to hear the frequencies affected by the de-essing process
- Broadband or Multi-band operation.



Traditionally, De-Essing is used to dynamically reduce loud sibilant noise particular from vocal takes, either spoken or sung. This technique can also be extended to other audio material containing large amounts of high frequency information, such as cymbals, distorted guitars, or other percussive elements.

Alloy's De-Esser however provides a completely customizable De-Essing bandwidth range, allowing it not only to excel in traditional circumstances but also provides for other unique uses.

Placing your mouse into the De-Essing bandwidth range will allow you to click and hold to drag your frequency boundaries left and right, as shown below.



Note: With your mouse in this frequency range, you can use your mousewheel to make your range either narrower or broader

By setting the De-Esser's frequency range in lower mid-range frequencies and adjusting your settings, this module can also become a powerful tool for controlling build up of mud or other problematic audio at any frequency. As another unique effect and alternative to standard dynamics processing, using De-Esser's Broadband mode can serve to control overall volume of your signal, triggered by whatever frequency area you select. Depending on Attack and Release times, this volume control can range from a thick and heavy pumping effect to a subtle dropping of volume whenever the De-Esser is triggered.

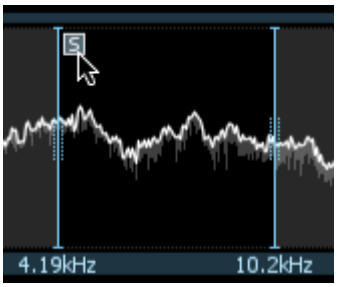
Multiband/Broadband: Multi-band mode will affect only the frequency range selected whenever a sibilant signal passes above the specified threshold. Broadband mode will reduce gain on the entire audio signal when De-Esser is triggered by loud sibilance in the selected frequency range.

Threshold: The threshold control affects the point at which the De-esser is engaged.

Attack: This is the amount of time the De-Esser will wait once any audio sibilant passes the threshold to apply its gain reduction algorithm.

Release: The amount of time that the De-Esser will take to reduce its gain reduction to zero once the sibilant audio has passed below the threshold.

Band Solo: Engaging this solo button allows you to preview only the audio material that De-Esser's triggering circuit will be listening to, allowing you to better train the processing on your troubled audio.



Additional Metering

At the top of the De-Esser module is the meter that as a default displays the Mini Spectrum and the crossovers used for processing. You can also click the second minispectrum view button in the top left of the window to view Gain Reduction Trace.

Gain Reduction Trace: a scrolling meter that displays the incoming signal's waveform with a superimposed curve that illustrates the amount of gain reduction taking place in real-time. The Gain Reduction Trace can help you to set attack and release controls appropriately and monitor the envelope of gain reduction.

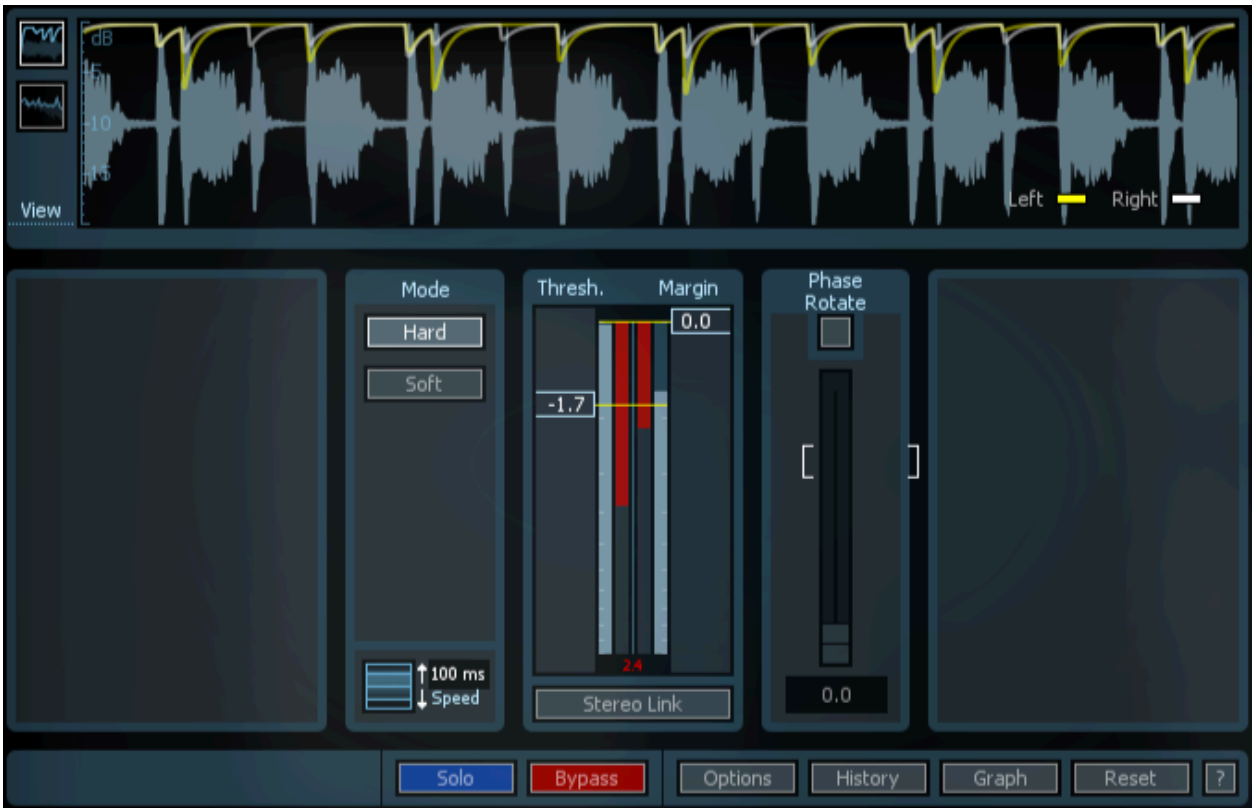
Note: You may click on the "Gain" legend indicator in the bottom right to toggle on and off the drawing of gain reduction.

Limiter

Alloy's Limiter allows you to create an overall louder or fuller mix by limiting the dynamic range and boosting the perceived overall level of your mix.

Key Features

- Gain Reduction Trace provides valuable visual feedback of gain reduction
- Interactive Threshold/Margin control allows you to adjust the amount of limiting in visual relation to the level of the incoming signal
- Stereo Link feature allows you to limit the left and right channels independently



Limiting Modes

Hard: The hard limiter uses the Margin point as an absolute guide, and the final output level will not exceed this point.

Soft: The soft limiting algorithm uses the Margin (or final output level) as a guide but not as a fixed limit for the output level. It provides a natural "soft" limiting effect at the expense of allowing the level to exceed the margin. To avoid clipping in Soft mode, set the Margin well below 0db.

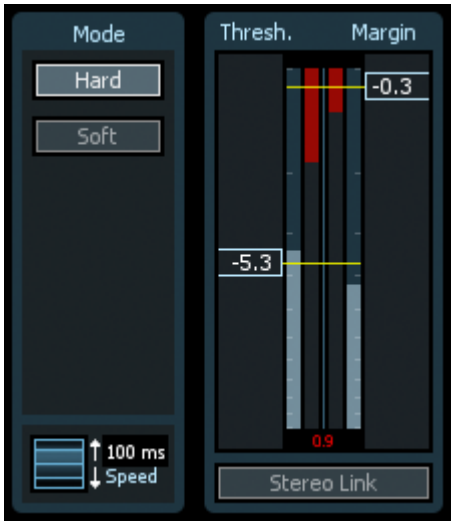
Limiting Controls

Threshold: Determines the point that the Limiter will begin compressing the signal. Turning down the threshold limits more of the signal which in turn will create an overall louder mix. In other words, by turning down the Threshold you limit the dynamic range of the mix, and the limiter automatically adds gain proportionally to maximize the output level.

Margin: Determines how much to boost the output signal after limiting. If the Margin is set to 0 dB, the signal will be boosted all the way up to 0 dB. If the Margin is set to -0.3 dB, makeup gain will be applied until the output signal is at -0.3 dB. Note that in the Soft mode, the level may be allowed to cross the Margin setting, while in Hard mode the Margin serves as an absolute "stop" point.

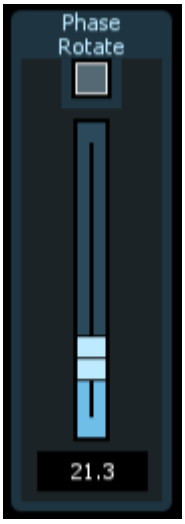
Speed: This is the release time for the limiting. In general, more extreme limiting will benefit from longer release times.

Stereo Link: The Limiter defaults to 100% stereo linking which imposes one limiter across the stereo image. When deselected, Stereo Link allows the left and right channels to be limited independently.



Phase Rotation

This feature can help reduce asymmetric waveforms that are found in dialog and voice. Making the waveform more symmetrical allows the voice to ride perceivably higher in the mix. This is useful in broadcast radio and dialog mixing. To enable Phase Rotation, click the button in the Phase Rotate control box.



Amount: Adjusts how much the incoming signal's phase is rotated in order to achieve

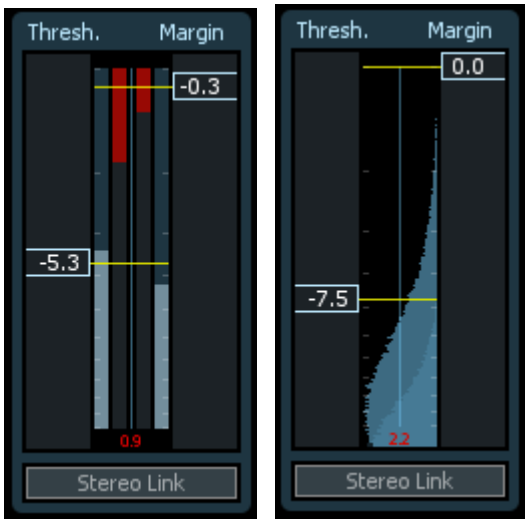
symmetry. You may monitor the waveform drawn in the Gain Reduction Trace (explained below) to see when a waveform is asymmetrical.

Note: Phase Rotation occurs before the limiting process within Alloy's internal signal path.

Visuals

The Threshold Control is a meter that allows you to adjust the Threshold and Margin of the limiter in visual relation to the levels of the incoming and outgoing signal.

The Threshold Control displays gain reduction as it is taking place with level meters. Two meters display the levels of the incoming signal and as gain reduction begins to take place, a gain reduction meter appears in red between the two signal level bars. The Threshold Control meter also displays the amount of gain reduction in real-time with a dB readout at the bottom.

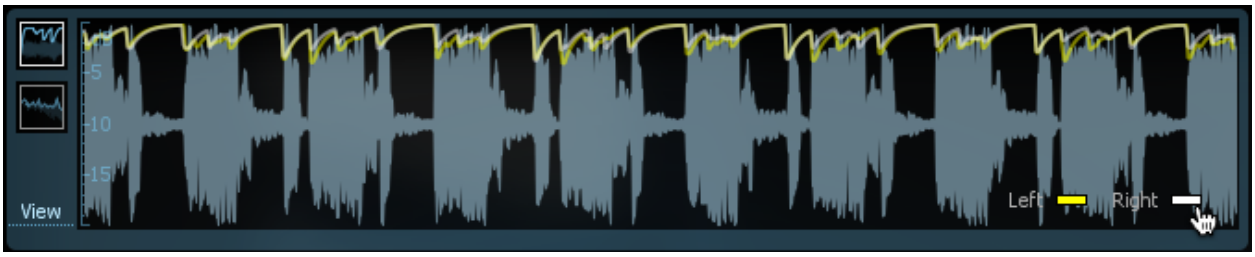


The Threshold Control can also display a histogram, a history of level over time. To enable the histogram, right- (or control-) click on the threshold control's meter window and select Limiter Options. From the Limiter options page select Histogram under the Threshold Meter drop-down menu. This allows you visualize the overall "level content" of the audio by providing a running display of the history of levels in the audio.

Learn more about gain reduction meters and histograms here.

Mini-Spectrum Window

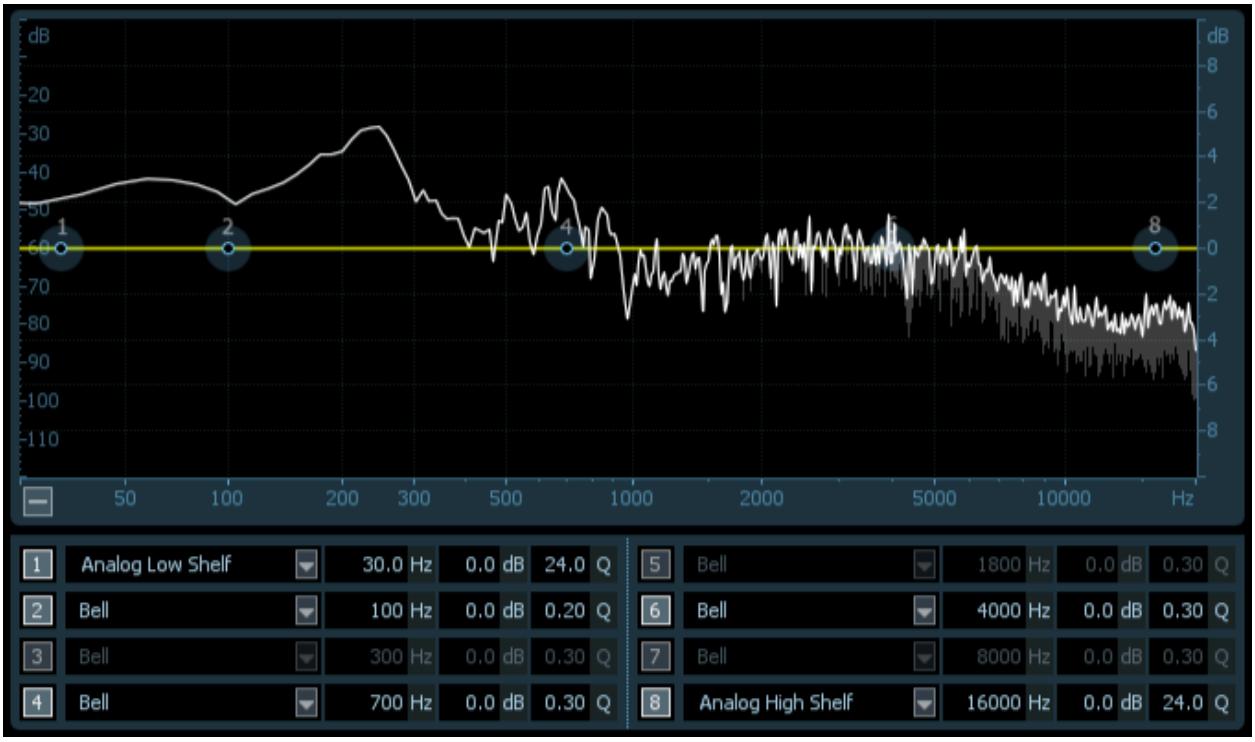
Gain Reduction Trace: The Gain Reduction Trace is a scrolling meter that displays the incoming signal's waveform with a superimposed tracing that illustrates the amount of gain reduction taking place in real-time. The Gain Reduction Trace can help you to set attack and release controls appropriately and monitor the envelope of gain reduction. It may also be used in conjunction with the Phase Rotation control to correct asymmetrical waveforms. When Stereo Link is deselected, the Gain Reduction Trace will draw two lines; one for each channel.



Note: You may click on the Gain legend indicators "Left" and "Right" in the bottom right to toggle on and off the drawing of gain reduction of the left and right channels of your audio.

Meters
Spectrum Analyzer

The spectrum provides a real time display of the frequency content of the mix. This display helps with EQ'ing and adjusting the band cutoffs for multi-band dynamics. Alloy 2 shows two spectra, so users can see both peak and average spectra simultaneously in the display.



Options

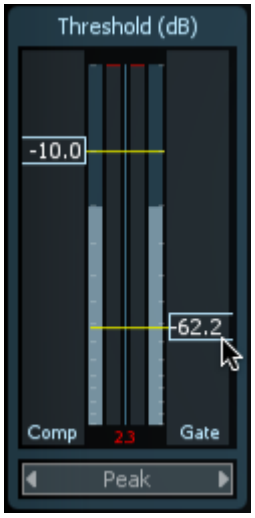
You can set options for the spectrum by accessing the Spectrum Options tab or right-clicking (under OS X you can also ctrl-click) the spectrum and selecting "Spectrum Options" from the context menu.

Dynamics Meters

Alloy provides three types of meters for viewing the dynamics of a mix. You can set options for these meters by right clicking on any of the dynamics meters, or selecting the Dynamics Options or the Limiter Options in the Options panel.

Threshold Control Meters

Both the Dynamics and Limiter modules feature Threshold Control Meters that allow you to adjust the thresholds of the gate and compressor in the Dynamics module and the threshold and the margin of the Limiter, while monitoring how the signal is being affected in real time.

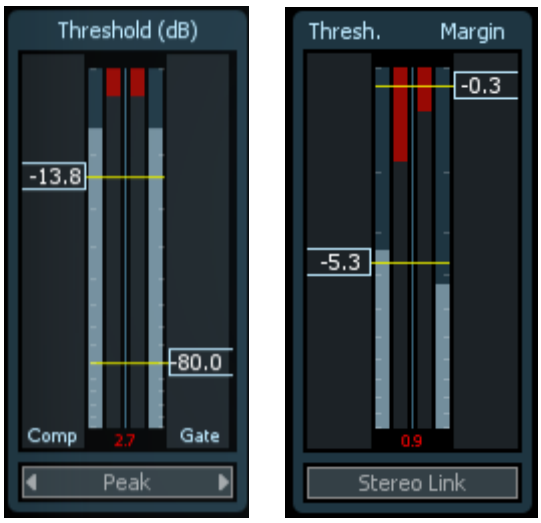


The Threshold Control can display gain reduction as it is taking place with level meters. Two meters display the levels of the incoming signal and as gain reduction begins to take place, a gain reduction meter appears in red between the two level bars. The Threshold meter also displays the amount of gain reduction in real-time with a dB readout at the bottom.

The Threshold Control can also display a Histogram, a history of level over time. To enable the histogram, right- (or control-) click on the threshold control's meter window and select Dynamics or Limiter Options. From the Dynamics or Limiter options page select Histogram under the Threshold Meter drop-down menu. This allows you visualize the overall "level content" of the audio by providing a running display of the history of levels in the audio.

Reduction Meters

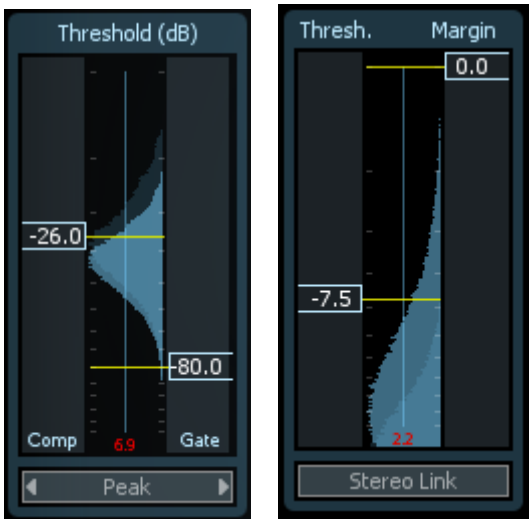
When working in the dynamics and limiter modules, the reduction meter provides you with a readout of how much the dynamics processing is changing the level of the signal. You can select whether these red meters are drawn from the top down as pictured below or if they are attached to the incoming level meters from the Dynamics or Limiter options page. To draw the reduction meters attached to the level meters, select "Attached" under the Gain Reduction Draw Mode drop down menu.



In the image on the left the compressor at that point in time is compressing or reducing the level of the input signal by 2.7 dB. On the right the Limiter at that point in time is limiting or reducing the level of the left channel of the input signal by 0.9 dB.

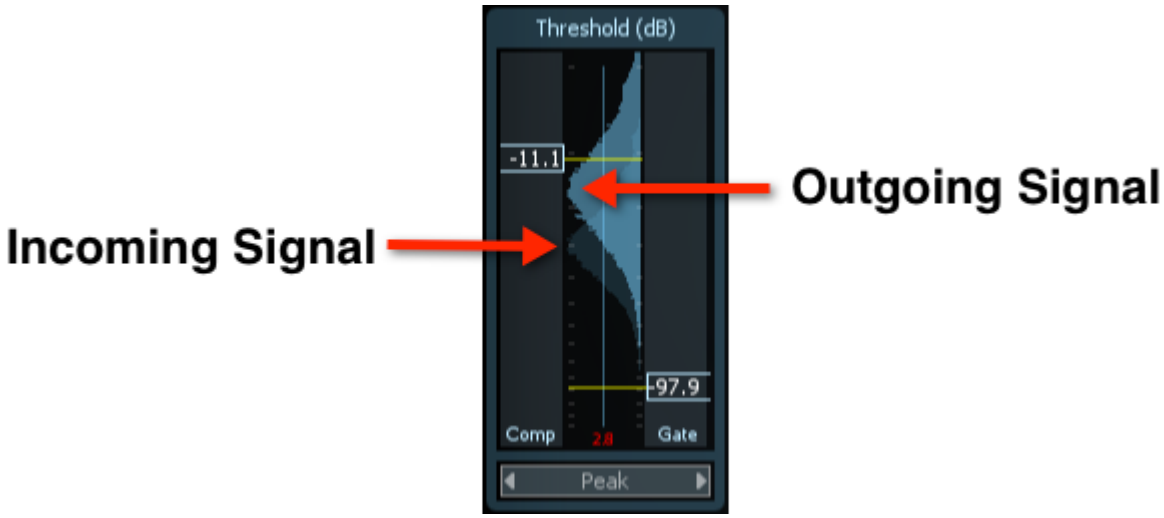
Level Histograms

Level histograms can be turned on in the Dynamics and Limiter modules to provide a view of the audio level as a function of time in the Threshold Controls.



As Alloy processes audio, it calculates the level and displays it on the level histogram. Unlike a standard level meter, the level histogram provides a view of the history of the level over time. The height of the histogram represents the high and low levels of the audio, while the width of the bar indicates the most frequent levels.

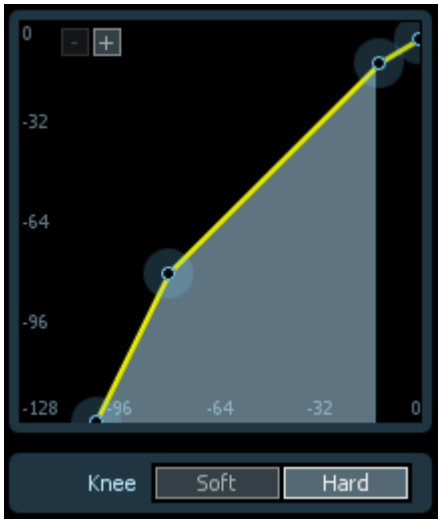
For additional visual feedback, an additional histogram is displayed for regions that are being compressed by the Limiter or the Dynamics modules.



Dynamic Curve Meter

This meter shows the input signal (x axis) plotted against the output (processed) signal (y axis). More horizontal compression curves means the signal is being flattened (compressed) more.

By default, the range of the meter is from 0 dB to -64 dB. You can adjust the range by pressing the (+) or (-) buttons in the graph to see a zoomed-in or zoomed-out view of the curve.



Note: If you zoom out completely so the range is 0 dB to -128 dB, you'll be able to set compressor/limiter/expander thresholds down to -130 dB. When you zoom in again, the thresholds will keep their values, even though the sliders will adjust to allow finer control of thresholds between 0 dB and -80 dB.

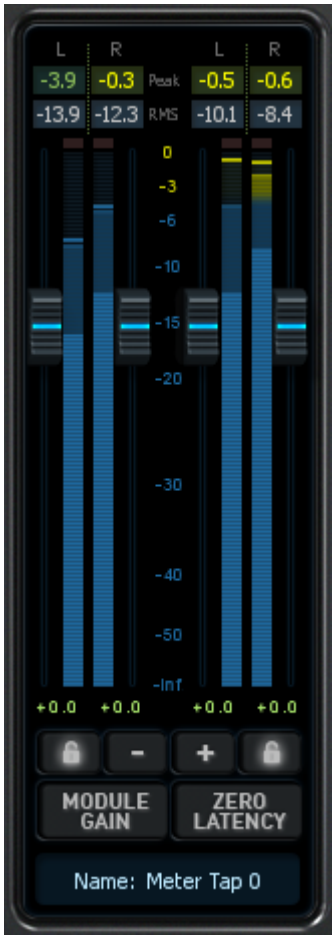
You can also set individual options for this meter by right-clicking (under OS X you can also ctrl-click) on it to bring up the dynamics meter options screen.

Nodes:

The meter features individual nodes for the Compressor and the Gate as well as nodes surrounding these that represent input and output. These nodes are linked to the Threshold and Ratio controls, and can be used to adjust the curve in a visual way, rather than setting them with the standard controls.

Input and Output Meters

Alloy level meters display the input and output level for the left and right channels.

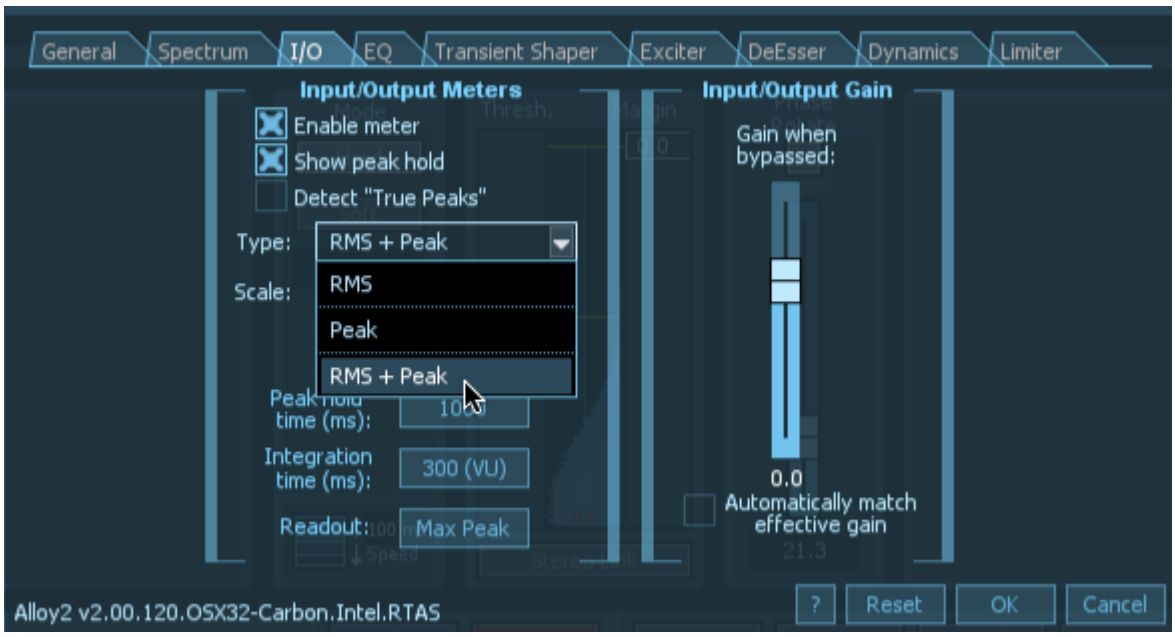


Note: You can set these options by opening the Options Dialog and selecting the I/O Options tab. The available options for calibrating Alloy's I/O meters are listed below.

RMS: RMS (Root Mean Square) is a software-based implementation of an analog style level meter. Using different integration times, you can model popular VU or PPM meters. The RMS meter displays the average level calculated over a short window of time. The RMS meter readout will typically be lower than an equivalent PPM meter (Digital/Analog), since it is averaging peaks into the overall loudness.

Peak: The Peak meter is a fast meter that measures instantaneous maximum sample value OR peak analog waveform values, depending on the "Detect 'True Peaks'" checkbox in the I/O options menu. If you are tracking the peaks for possible clipping the Peak meter is appropriate.

RMS + Peak: This is a combined RMS and Peak meter. This meter displays a lower bright bar representing the average level (RMS) and a higher dimmer bar representing peak level. There is also a moving line above the bar representing the most recent peak level or peak hold.



Setting the Scale of the Meters

By default, the range of the meters is from 0 dB to -96 dB. You can further customize your metering by adjusting the scale of the input and output meters. Clicking the (+) sign below the meters will increase the zoom or resolution of the metering scale, and clicking the (-) sign will decrease or zoom out the resolution of the metering scale.

You can also adjust the scale by pressing down the Ctrl key under Windows or the Command key under OS X and clicking with the left mouse button to expand the range or the right button to decrease the range.

Scale Options

You can set the following meter scales in the I/O tab of the Options Dialog, which you can also access by right-clicking (under OS X you can also ctrl-click) on the level meters:

dB (Linear) - decibel scale presented linearly from -60 dB to 0 by default

dB (Non-linear) - full decibel scale (dBfs) presented non-linearly

Peaks

By default, the meters will hold peaks. You can configure this in the I/O tab of the Options Dialog, which you can also access by right-clicking (under OS X you can also ctrl-click) on the level meters.

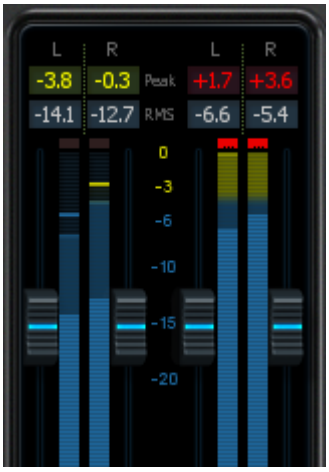
To reset a peak that is holding, click anywhere on the meter.

Clipping

Above the meter is a red LED that serves as a clipping indicator. If the level exceeds 0 dB at any point, this LED will light up and remain lit until you click anywhere on the LED itself. The clipping indicator will also show the number of samples over 0 dB you have clipped. (Once you have clipped over 99 samples the indicator will show three periods...)

By default the Input/Output meters will only indicate clipping which occurs within the digital domain. To accurately measure the signal that will result from digital to analog conversion

select 'Detect "True Peaks"' in the I/O Options tab.



Module Input/Output Meters

In addition to the global Input/Output Meters Alloy 2 features per module Input/Output meters as well as gain controls. By clicking the Module Gain button below the Input/Output meters, these meters function as independent input/output meters for the module you are currently in within Alloy. This allows you to measure and set the input and output gain for each individual module and control levels throughout the signal chain. The faders on the Module Input/Output meters function in the same way as those in the global Input/Output meters. Clicking the module gain button again brings back the global Input/Output meters.

While in Module Gain mode, the Input/Output meters will share the settings of the global gain Input/Output meters. The Module Input/Output meters will reflect whatever module you are currently working in.

Graph and Sidechain
Setting the Order of the Modules

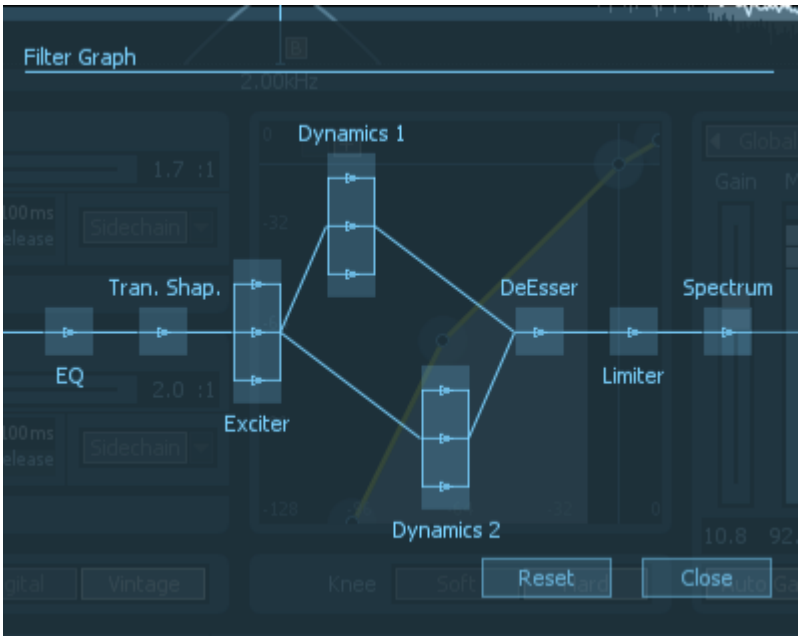
By default, the order of processing is the order listed below (the signal passes through the Equalizer, then the Transient Shaper, etc.). The spectrum is based on the final output signal (after all processing).

- Equalizer
- Transient Shaper
- Exciter
- Dynamics
- De-Esser
- Limiter

You can change the ordering of the processing by clicking on the Graph button.

Filter Graph

This provides a signal path flowchart of the current settings. You can modify the order by clicking a module and dragging it with the mouse to a new position. You can also place the spectrum anywhere within the processing, if for example you'd prefer to see a spectrum of the audio going into the EQ as opposed to seeing the spectrum after equalization.



Close: To apply the new signal order, click on the Close button.

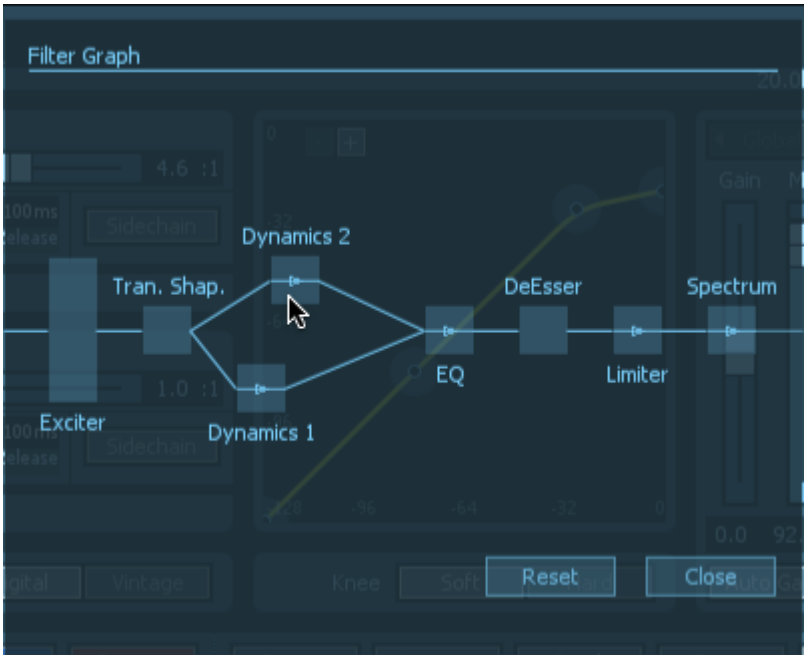
Reset: If you want to reset to the default order, click the Reset button.

Parallel Processing

Instead of Alloy's Dynamics 1 and 2 modules running in series, one right after the other, they can also run in parallel. The incoming audio will be split into two identical audio streams, each running independently into Dynamics 1 and Dynamics 2. This allows two different compressors to act upon the incoming audio at the same time.

To turn Parallel Dynamics processing ON, simply open the Graph and click and drag one Dynamics module up and over the other.

Dynamics 1 and 2 must both operate in either single band or multi-band modes. If both are in multi-band mode, each module must have the same crossover frequencies. This is done to maintain phase and high audio quality when working with this internal routing. Therefore, when you configure the dynamics modules in parallel, Dynamics 2 will automatically adapt to the crossover settings of Dynamics 1. This will include whether Dynamics 2 is processing in single or multi-band and within multi-band processing, the crossover cutoff frequencies.



The benefits of parallel processing are such that one Dynamics module can have very severe pumping settings in order to create the effect of heavy compression and expansion, while the other module only has very light settings. This will give your audio the sound of heavy dynamics processing without sacrificing your dynamic range entirely.

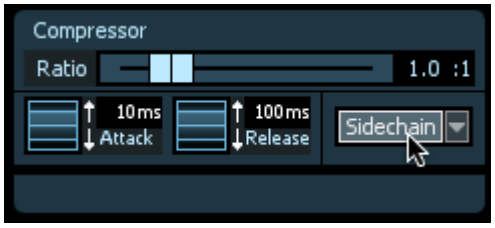
Routing Sidechain Signals

By default, Alloy's Dynamics module will simply respond and react to the incoming audio from the track that Alloy is inserted on. In this way, if the incoming audio passes the specified threshold values inside of Dynamics 1 or 2, the module begins to process the audio.

When working with sidechain signals however, each Dynamics module will still process the incoming audio, but the module will no longer be triggered by the same incoming audio. Instead, the compressor will be triggered either by an external audio source or audio from one of the bands in the multi-band Dynamic's crossovers.

Single Band Sidechain

To enable a sidechain input, click the Sidechain button within the Compressor or Gate controls box. For both Dynamics 1 and 2, Alloy can accept incoming sidechain trigger signals from an external source of audio as defined inside of your host audio application. When sidechaining with single band dynamics, Alloy will use this external source by default.



Inside of your host application, with the use of busses, sends or aux tracks, you will need to send the audio signal you would like to serve as your sidechain trigger to the audio track that Alloy is inserted upon.

As each audio host application is different, please refer to your host's help documentation for instructions on how to route audio to Alloy.

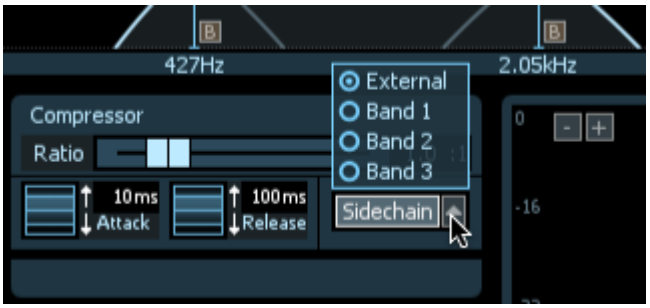
Note: Incoming stereo sidechain signals will be mixed and summed to mono for use in triggering the Dynamics modules.

Multi-band Sidechain

Traditionally, external audio is used to trigger the sidechain on single band dynamics processes such as compression/gating/expansion. Alloy however, utilizing its multi-band operation, can allow for the audio output of individual bands to be the trigger source for other bands' compressors and gates.

This is achieved first by switching either Dynamics 1 or 2 into multi-band mode. Then, by enabling the sidechain input and opening the sidechain drop down menu, the audio output of each band is available as a source to act as the trigger for that band's Compressor or Gate.

Each of the three available bands in each Dynamics module, as well as any external audio inputs, will be available to choose as a sidechain trigger source. This allows for unique processing and routing ranging from simple traditional setups to a more complex matrix of dynamic control that moves beyond simple sidechain inputs.



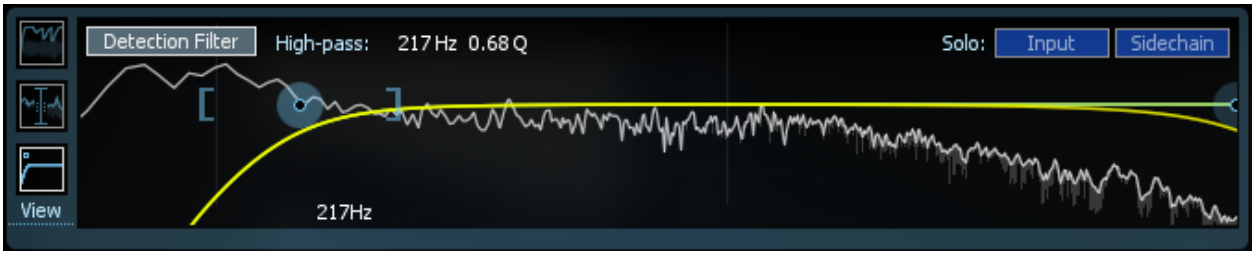
This can also be used as a way of EQ'ing the source audio for Alloy's Dynamics crossover sections. By using multi-band compression, and choosing Band 1 as the compression trigger for all three bands, the Dynamics module will now only be triggered by audio in the lower frequencies contained in Band 1. The result being that the compressor in this example will only be triggered by things such as the kick drum in a drum track or the thump of lower strings in a guitar track.

Note: Any settings of the Detection filter will affect the audio from the sidechain input.

Detection Filter

Both of Alloy 2's Dynamics modules feature an optional Detection Filter with both resonant high- and low-pass filters. These filters allow you to adjust what each of Alloy 2's Dynamics module's detection circuits are responding to so that the dynamics process isn't triggered by certain frequencies or so the process may be weighted heavier on certain frequencies.

To enable the Detection Filter, select the third minispectrum view button in the top left of the window. Then, click the Detection Filter button which appears in the the top left.



Once enabled, two nodes will appear which function much like passfilter nodes in the EQ module. They may be dragged to adjust frequency and feature handles which allow you to adjust the Q. Alternatively, you may enter precise values for each by clicking on the node and entering values in the readouts at the top of the window.

Setting the Order of the Modules

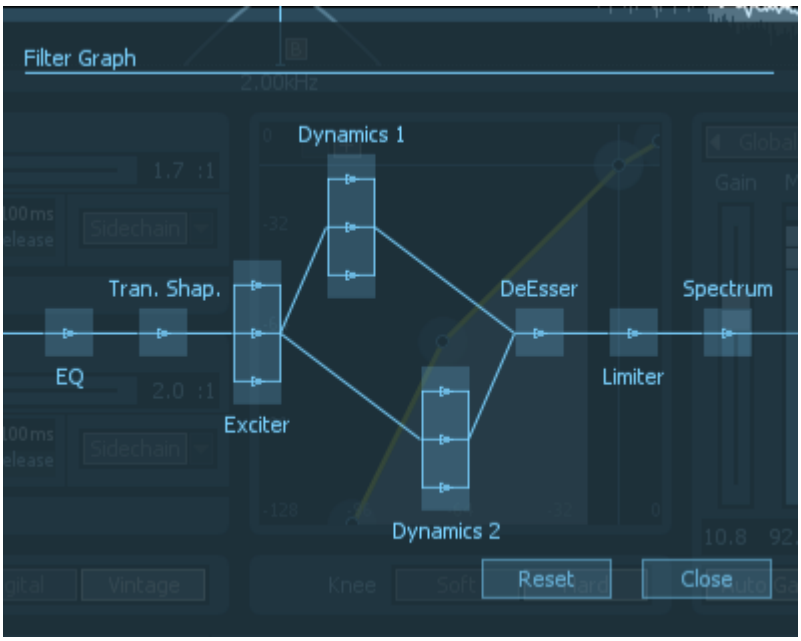
By default, the order of processing is the order listed below (the signal passes through the Equalizer, then the Transient Shaper, etc.). The spectrum is based on the final output signal (after all processing).

- Equalizer
- Transient Shaper
- Exciter
- Dynamics
- De-Esser
- Limiter

You can change the ordering of the processing by clicking on the Graph button.

Filter Graph

This provides a signal path flowchart of the current settings. You can modify the order by clicking a module and dragging it with the mouse to a new position. You can also place the spectrum anywhere within the processing, if for example you'd prefer to see a spectrum of the audio going into the EQ as opposed to seeing the spectrum after equalization.



Close: To apply the new signal order, click on the Close button.

Reset: If you want to reset to the default order, click the Reset button.

Preset System
Preset Manager

Alloy has over 100 Presets designed by professional engineers, composers, musicians and sound designers. These presets are designed to help with common mixing techniques and tools for applications like Drums, Guitar, Bass, Vocal, Utility, Special Effects and Orchestral recordings.

To access the Preset Manager, click the Global button under Presets in the lower right corner of Alloy's faceplate or press Ctrl+P.

Key Features

- Easily backup and transfer preset files
- Store preset files in folders for easy access and management
- Share Alloy presets across multiple host applications and operating systems
- Sort presets based on name, date modified or date last used
- Update presets with one click
- Add comments to presets for easy reference.

Folders

Alloy 2 presets have been sorted and organized into separate categories or preset folders. This makes finding a good starting point for your mixing session quicker and easier. The default preset folders that are included with Alloy 2 are listed below.

- Bass
- Drums (Mixed and Loops)
- Drums (Individual)
- Guitar
- Orchestral and Ensemble

- Piano and Keys
- Podcast and Broadcast
- Post Production
- Special Effects
- Synths and Pads
- Utility
- Vocals

Dock and Undock

Clicking the Undock button at the bottom of the Preset Manager opens a floating window. This lets you work with the Preset Manager while still being able to view the edit windows for the individual Alloy modules. To have the Preset Manager return to the Alloy interface click the Dock button.

Selecting Presets

To access the Preset Manager, click the Global button under Presets in the lower right corner of the Alloy faceplate or press Ctrl+P.

Loading Presets in Alloy

You can select and audition any preset by simply clicking on the name in the list. This will activate selected Alloy modules and you will hear the effect of the preset when you playback your audio. You can easily compare several different presets just by picking a different name on the list.

Working with Presets in Alloy

Once you have selected a preset from the list, you may choose to change the original settings within a specific module. When you change any of the original settings within a preset you will see an asterisk* added to the beginning of the preset's name. This means that the preset has been altered. If you want to keep these settings you need to Add a new preset or Update the existing preset.

Working Settings

If you modify a preset's settings, then these modified settings become your "Working Settings". Your Working Settings will always be at the top of the preset list within the preset manager. This allows you to freely preview and compare different preset options. When you are done, you can return to your Working Settings by selecting the item at the top of the Preset Manager labeled <Working Settings>. To select a preset and have it replace your Working Settings, just select the name of the new preset and click the Close button.

Sort by Name, Last Used, or Last Modified

As a convenience you can sort presets by name, by the time/date last used, or the time/date last modified.

Last Used

A preset is considered "used" when you select it and you close the preset system dialog. The last used time/date stamp is not updated when you are selecting and auditioning presets from the list.

Last Modified

A preset is considered "modified" when you either create one or you make changes to one and update it with the Update button.

Adding and Removing Presets

Add: Clicking this button adds the current Alloy settings as a new preset. You can type a name and optionally add comments for the preset. Note that a few keys such as * or / cannot be used as preset names. If you try to type these characters in the name they will be ignored.

Note: This is because presets are stored as xml files (for easy backup and transferring). Their file names are the same as the name you give the preset (for easy reference) and therefore characters that are not allowed in Windows file names are not allowed in preset names.

Delete: To permanently delete a preset, select the preset from the list and click the Remove button.

Update: When you click the Update button your current settings are assigned to the selected preset (highlighted). This is useful of course for selecting a preset, tweaking it, then coming back to the preset system and clicking Update to save your changes to the existing preset.

Compare: The Compare button is a great way to quickly hear the difference between the default settings of the most recent preset that you've selected, and the result of any changes that you have made to this preset (Working Settings). This lets you start your mixing session based on one of Alloy's default presets and then continue to tweak the settings, always comparing to where you started.

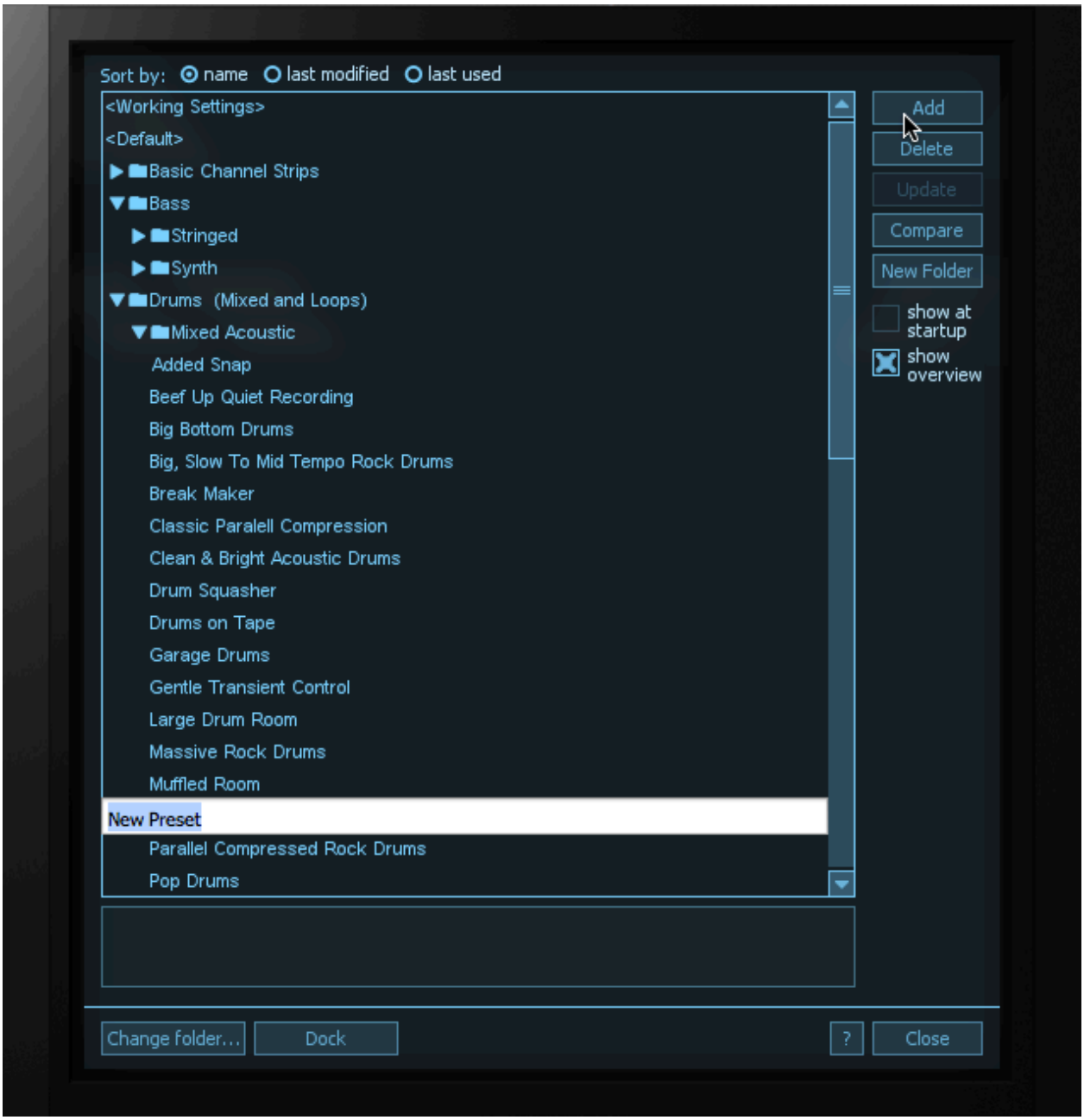
New Folder: The New Folder option allows you to easily add custom named folders to the Alloy preset manager.

Show at Startup: This allows you to set whether or not the preset manager will open automatically when starting Alloy.

Show Overview: This forces Alloy to display the Overview Panel by default when loading a new preset.

Close: Closes the preset manager loading the last preset you selected from the preset list.

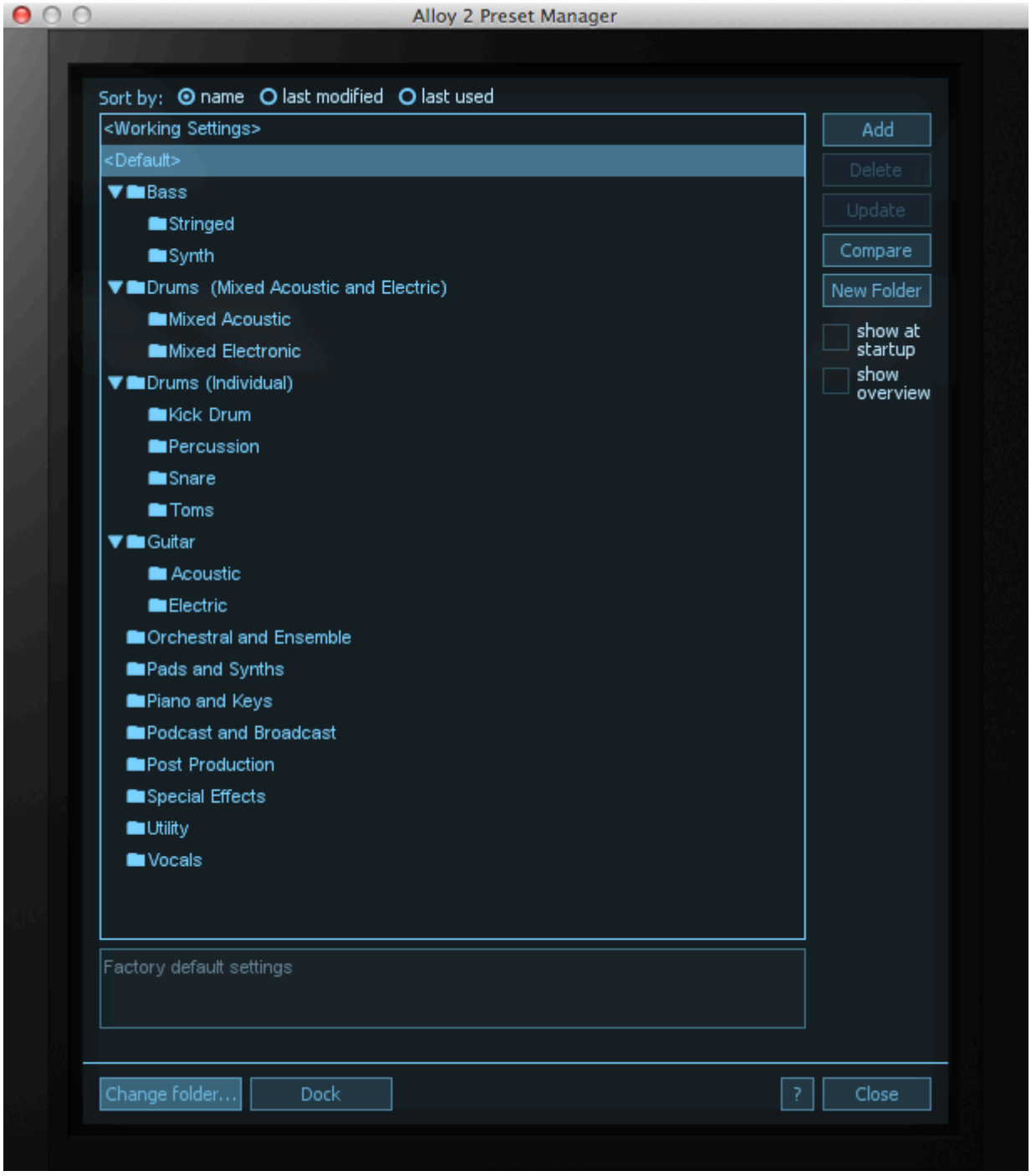
Renaming Presets: You can double click on the name of a preset to enter the "edit" mode and then type a new name for that preset.


Sort by: name last modified last used
<Working Settings>
<Default>
Basic Channel Strips
Bass
Stringed
Synth
Drums (Mixed and Loops)
Mixed Acoustic
Added Snap
Beef Up Quiet Recording
Big Bottom Drums
Big, Slow To Mid Tempo Rock Drums
Break Maker
Classic Paralell Compression
Clean & Bright Acoustic Drums
Drum Squasher
Drums on Tape
Garage Drums
Gentle Transient Control
Large Drum Room
Massive Rock Drums
Muffled Room
New Preset
Parallel Compressed Rock Drums
Pop Drums
Add
Delete
Update
Compare
New Folder
show at startup
show overview
Change folder...
Dock
?
Close

Changing Where Presets Are Stored

Change Folder

You don't need to store all of your presets in the default folder(s). You can create custom folders of presets for different projects, archive presets, etc. To change the folder that Alloy looks to for presets, click the Change Folder button and browse to the folder that contains the presets you want to use.



Backing up Presets

Backing up presets is as simple as copying files. Just browse to the location of your preset files. The XML files in this folder are your presets with one XML file for each preset. You can reference the preset files by their file names because the name you give the preset in Alloy becomes the name of the XML file.

Windows Users

C:\Documents and Settings\<your username>\My Documents\iZotope\Alloy 2\Global Presets

Mac Users

<username>\Documents\iZotope\Alloy 2\Global Presets

Module Preset System

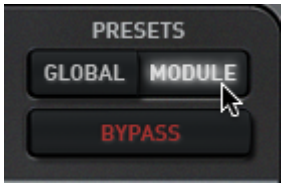
Alloy 2 includes a module preset management system. You can now load and save preset settings for individual modules allowing you to mix and match settings for various modules. The module preset system works in a similar way to the global preset system but with a simplified interface more conducive to working with individual modules.

Key Features

- Easily backup and transfer preset files for individual modules
- Load settings for a module without affecting the settings of other modules
- Save settings from global presets for an individual module

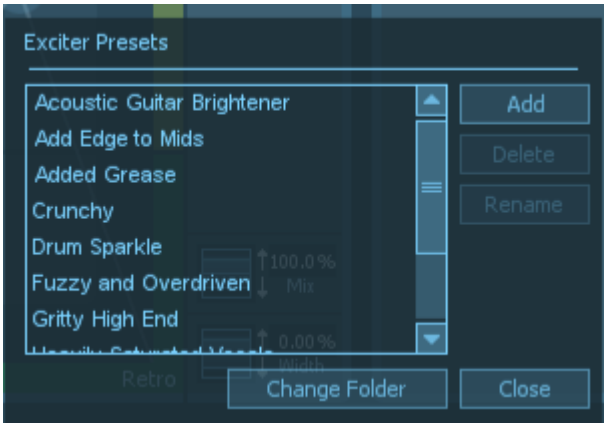
Opening the Module Preset System

While working in any module of Alloy, click the Module button under Presets in the bottom right of Alloy's faceplate to open the Module Preset System menu for the module you are currently working in.



Loading Module Presets

You may apply the settings of any of the module presets by clicking on them in the Module Preset menu.



Saving Module Presets

After applying your own settings to a module in Alloy or after altering an included preset, you may save the settings as a custom preset by opening the Module Preset menu and clicking the Add button. You will then be prompted to name the new preset. Additionally, you may save the settings of an individual module from a global preset into a new module preset.

Deleting Module Presets

You may delete any module preset by opening the Module Preset menu, highlighting the preset, and clicking the Delete button.

Changing the Module Presets Folder

Like the Global Preset System, the Module Preset system allows you to specify where module presets are stored on your hard disk. Simply open the Module Preset menu and click the Change Folder button. A file window will open in which you may specify the location of module preset files. By default, each module's presets are stored in a folder located at the following locations:

Windows Users
C:\Documents and Settings\<your username>\My Documents\iZotope\Alloy 2\

Mac Users
<username>\Documents\iZotope\Alloy 2\

Migrating Presets from Alloy 1

We have done our best to ensure all presets from Alloy 1 open in Alloy 2 sounding as good (or better!) than they did previously. However, some modules have been completely overhauled with new algorithms and processing and may sound different when loading your Alloy 1 presets.

Equalizer

All Equalizer settings from Alloy 1 will carry over to Alloy 2. And while in the EQ, be sure to try out the new filter curves. You may find that you are now able to create complex curves with fewer nodes or achieve better results than you could before.

Transient Shaper

We have completely reworked the Transient Shaper module in Alloy 2. We have mapped settings from Alloy 1 intelligently to Alloy 2, so your presets should open with a similar sound, however, be sure to take the time to tweak settings to take full advantage of the improved module.

Exciter

We have updated all the algorithms used by the Exciter. While each mode has been significantly improved from Alloy 2, you may find that the Drive controls need an adjustment to recreate your previous sound. In general, the various modes in Alloy 2 are predisposed to being more overdriven allowing you to add a more pronounced range of saturation. You may find that a drive setting of 15 in Alloy 1 is equivalent to a setting of 10 in Alloy 2. Additionally, we have tried to better address gain compensation across the various saturation modes. Therefore you may find your levels have changed slightly in Alloy 2 from those in Alloy 1. You may address this with the Module Gain Input/Output sliders.

Dynamics

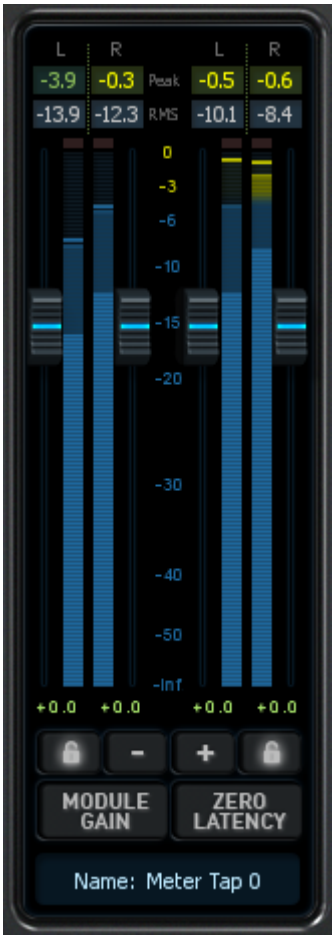
We have refined the way the Vintage mode operates in Alloy 2. When opening presets saved in Alloy 1, you'll find that the way Attack and Release settings trigger the dynamics processing has changed slightly. However, we feel Vintage mode now behaves more predictably while maintaining its desired vintage characteristics. All Dynamics settings from Alloy 1 will carry over to Alloy 2. However, be sure to try out some of the new Dynamics features on your preset. Try using the Side Chain Detection Filter to better focus which frequencies are triggering the Dynamics detection circuit.

Limiter

All Limiter settings from Alloy 1 will carry over to Alloy 2. Try disabling Stereo Linking to see if you can achieve more transparent limiting than you did with Alloy 1.

General Functions
Input and Output Gain

The panel on the right side of the Alloy interface is the main input/output section. This is used for setting and monitoring gain levels going into and coming out of Alloy.



Setting Input and Output Gain

You can adjust the input or output gain by sliding the faders with the mouse, either by clicking and dragging or clicking and using the wheel of a wheel mouse. You can also use keyboard shortcuts to adjust the level in small increments.

Adjusting Left and Right Channels Independently

By default, the left and right gains are linked so moving one moves the other. You can adjust left and right gain independently by clicking on the "unlock" icon. You can offset the two channels and then "relock" them, so that later adjustments move both channels by the same amount.

Faders will remember their offset even if they are temporarily turned up or down all the way, so that when you bring the faders back to the middle the offset will be preserved.

Double-click to Reset Faders

If the left and right faders are locked, double clicking on either fader will reset both of them to 0 dB. If the left and right faders are unlocked and set at different levels, double clicking a specific fader will reset it to 0 dB. If the left and right faders are locked but had been previously been set to different levels, double clicking on a fader will reset it to match the level of the other fader. Another double click will reset both faders to 0 dB.

Setting the Scale of the Meters

You can further customize your metering by adjusting the scale of the input and output meters. Clicking the (+) sign below the meters will increase the zoom or resolution of the metering scale, and clicking the (-) sign will decrease or zoom out the resolution of the metering scale.

Module Input/Output Meters

By clicking the Module Gain button below the Input/Output meters, these meters function as independent input/output meters for the module you are currently in within Alloy. This allows you to measure and set the input and output gain for each individual module and control levels throughout the signal chain. The faders on the Module Input/Output meters function in the same way as those in the global Input/Output meters. Clicking the module gain button again brings back the global Input/Output meters.

More Information

Right-clicking (under OS X you can also ctrl-click) on the level meters provides an options screen for the level meters.

You can set a gain offset for when Alloy is bypassed, to compare the sound when Alloy is on and off with a relative change in volume to help you objectively preview Alloy's processing with matched gain when Alloy is bypassed.

Zero Latency

When Zero Latency mode is active, look-ahead processing in Alloy's Dynamics, De-Esser, Limiter and Transient modules will be turned off allowing the plug-in to be used in situations where latency is undesirable, such as tracking or creating foldback mixes. In these cases, adding latency to your audio is undesirable as it will make your tracks out of sync with each other, and cause phasing.

The Zero Latency mode may be enabled by clicking on the Zero Latency button below the Input/Output meters.

With Zero Latency mode inactive, Alloy will impose a small delay to account for look-ahead processing, allowing the modules to react to incoming audio material quicker. If your host has delay compensation, this short delay is not an issue as your host application will keep all of your audio perfectly aligned.

Due to this functional difference however, the sound and behavior of the Dynamics, De-Esser, Limiter and Transient modules will change slightly with Zero Latency mode On or Off.

Undo and History Comparisons

The History window is a unique and powerful feature for comparing settings in Alloy. To access the History list, click on the History button.

As you tweak controls, each movement is captured and displayed in the History list. To go back and hear a previous setting, simply click on the list at the point you want to audition. The changes that you've undone will show up in a lighter color. In the screenshot below, all changes after the Dynamics 2 module's Global Gain was increased to 4.2dB are undone.

Clear button: You can also press the Clear button to clear the history list at any time.

Close button: If you close the History window, processing resumes from the point you had last selected, so you can continue building on the History list from a earlier point.

A,B,C,D buttons: You can assign up to four points in the History list to A, B, C and D buttons. To do this, select the point in the list you want to capture, and click on the "Set" button below the A, B, C or D button. Clicking on the appropriate button will then recall the setting assigned to that button.

History Depth: The history list has a depth setting which controls how many edits it remembers. You can change this setting in the General Options tab .

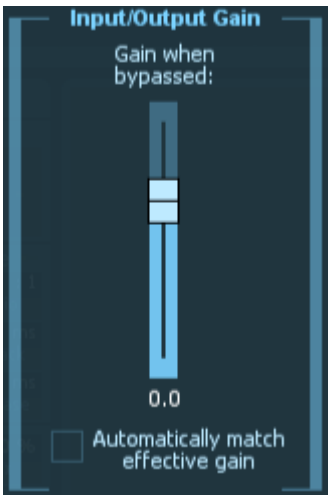
When you exit Alloy, the History list and any settings assigned to the A, B, C or D buttons will be saved to the file iZAlloy2.hst in the directory where you installed Alloy. The next time you start Alloy, the list will be remembered so you can pick up right where you left off.

While using Alloy, you can press Ctrl+Z repeatedly to undo edits you've made, and Ctrl+Y to redo edits. See Shortcut Keys and Mouse Support for more keyboard shortcuts.

Gain when Bypassed Function

If you right-click on the input/output level meters and select "I/O Options" the dialog box below is displayed. There is a useful feature called "Gain when bypassed" that allows you to set a gain that is only applied when Alloy is bypassed.

Note: Alloy's input/output meters typically don't run when Alloy is bypassed, but if Alloy is applying gain when bypassed, the I/O meters will keep working as a reminder that Alloy is still "processing" the audio.



Gain when bypassed

When Alloy is on there are many modules such as the multi-band dynamics and limiter that can affect the overall or perceived level of the mix. This makes it very hard to compare "Alloy on" to "Alloy bypassed".

"Gain when bypassed" solves this problem. You can bypass Alloy and set this gain so that when you A/B VAlloy on and off the apparent volume is the same. This is the only processing that is applied when Alloy is bypassed, and it is of course only applied when Alloy is bypassed.

Automatically match effective gain

When the "Automatically match effective gain" feature is engaged, Alloy determines how much gain is being added by all of the active Alloy modules and then automatically adds this amount of gain when Alloy is put into bypass mode.

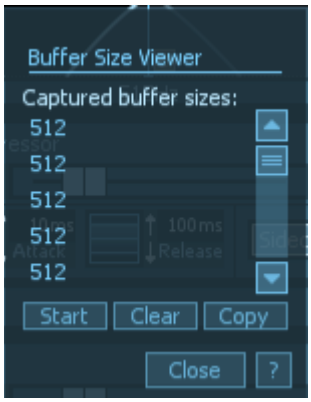
Note: This may not work if you use the host application to bypass Alloy. If the host application reports that it is bypassed, it will work and we will automatically depress the Bypass button in Alloy accordingly. If the host does not report that it is bypassed, Alloy doesn't know and therefore cannot apply the "gain when bypassed".

Buffer Size Viewer

The Buffer Size Viewer dialog lets you inspect the buffer sizes which your host application is using.

If you are using Alloy at low latencies, you may experience unusually high CPU usage. Alloy allows you to tweak several buffer sizes in order to optimize CPU usage for your host application settings. Some host applications make it very easy to see what your buffer sizes are, but it can be more difficult to determine in others. For that reason, Alloy provides this dialog to let you find out exactly what buffer sizes are being sent to the plug-in.

To use this dialog, simply launch it by clicking the View Buffers button on the General tab of the Options screen. Then use the following controls:



Captured buffer sizes: This list-box shows the buffers you have captured thus far. The number on the left is the input buffer size, and the number on the right is the output buffer size. Note that the input and output buffer sizes will usually be equal in Pro Tools, VST, AU and MAS versions of Alloy, but in the DirectX version if delay compensation is enabled then the sizes may differ. When tweaking buffer sizes, you're interested in the number on the left, which is the host application's buffer size.

Start/Stop: Push Start to begin capturing buffer sizes. Now each time a buffer is sent to the plugin, it will be added to the list of captured buffer sizes for you to see. Push Stop to stop capturing buffer sizes. Note that buffers are sent in very rapid succession to the plug-in, and after 100 buffer sizes are captured, the capturing will automatically be stopped.

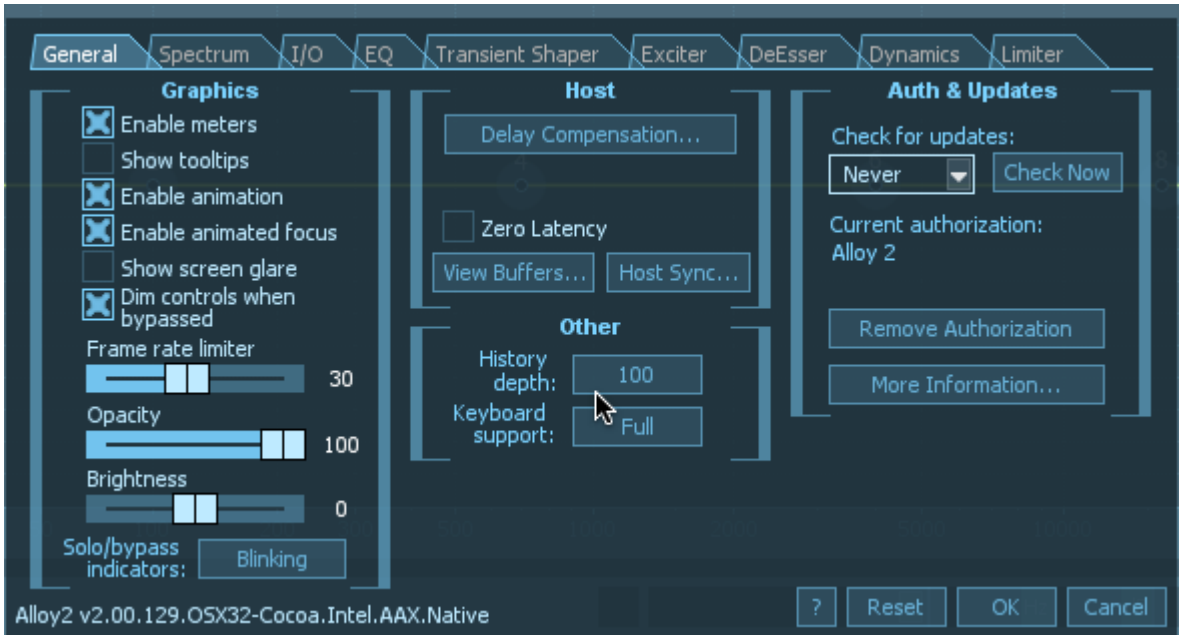
Clear: Clears the list of captured buffer sizes.

Copy: Copies the list of gathered buffer sizes to the clipboard, useful for pasting into a support e-mail if necessary.

See Buffer Sizes for more info.

Options
General Options

The General tab lets you configure general Alloy properties to improve Performance, Automation, Graphics, and Buffering as well as authorize Alloy. These properties are displayed in the table below.



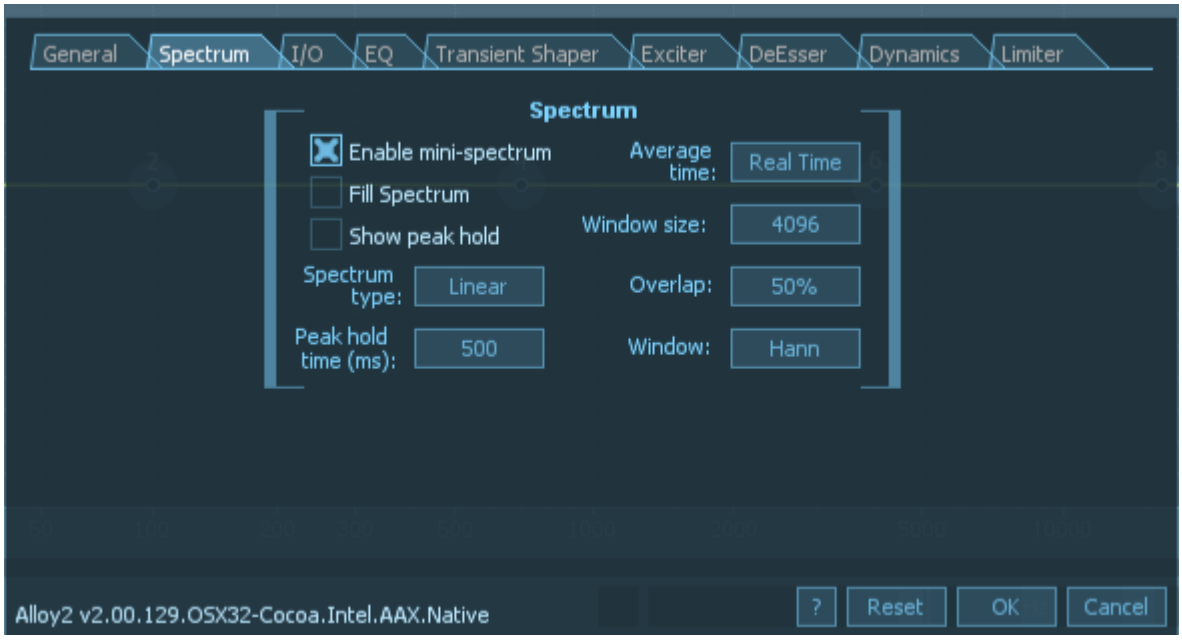
Graphics	
Enable meters	Although each meter has its own options, this option allows you to quickly turn on/off all meters.
Show tooltips	When enabled this allows informative notes to appear when the cursor/pointer is hovering on top of the features' controls
Enable animation	Allows you turn on/off the animated appearance of dialog boxes.
Enable animated focus	Allows you to turn on/off the animated white brackets which indicate the control where keyboard commands are sent.
Show screen glare	Toggles the visibility of the glare layer on top of Alloy's interface.
Frame rate limiter	Allows you to set the speed (frames per second) that Alloy should use to display and update meters. In most cases the default will provide smooth displays while still allowing adequate processing time for audio. If your PC hardware allows it, you can increase the frame rate for smoother animation. On the other hand, if you are running Alloy on slower hardware or notice graphics performance problems in your host application, you can set the FPS value lower to limit the amount of CPU Alloy uses for drawing.

Opacity	Allows you to control the opacity or transparency of the Alloy UI. This is helpful when working with automation, for example, to be able to have the Alloy UI in front but be able to "see through it" to the automation curves on the track view of the host app. Setting partial transparency does require additional CPU, but there is no CPU penalty when opacity is at 100% (i.e. the feature is not being used). If you find this feature useful, be sure to note the keyboard shortcuts for it. The slider will be disabled in host applications that do not support this feature.
Brightness	Allows you to control the overall brightness of the Alloy user interface. This allows you adjust the look of the UI to be more viewable on various monitors and in various venues.
Dim controls when bypassed	When this option is enabled, each module's controls will be dimmed when the module is bypassed. Modules can be bypassed in several ways: global bypass, module bypass, and crossover band bypass. This feature helps to remind you when a module is bypassed, so that you don't make adjustments to a bypassed module unintentionally.
Solo/bypass indicators	Allows you to set the behavior of the Solo/bypass indicators. Options are Blinking or Solid.
Host	
Delay compensation	Using some of Alloy's more CPU intensive settings and algorithms may result in a delay of the signal. That is, Alloy needs some time to "work on" the audio before it can send it back to the host application. That time represents a delay when listening or mixing down. Fortunately, many applications provide "delay compensation" which is a means for Alloy to tell the application it has delayed the signal, and the host application should automatically delay every other track in your session to align. If your host application supports delay compensation, enable this option. If your application doesn't support Alloy's delay compensation feature, or skips/stutters with this option turned on, you can manually correct the delay offset in the host application (i.e. manually edit out the short delay of silence). To help you perform manual correction, the delay Alloy introduces is shown below "Total System Delay" in both samples and milliseconds.
Low Latency RTAS Processing	This option only appears in the RTAS version of Alloy and by default will be disabled. When selected this option will help reduce latency in Pro Tools, but will cause higher CPU usage.
View Buffers	This launches the View Buffers dialog, which lets you inspect the buffer sizes which your host application is using. See Buffer Sizes documentation for more info.
Host Sync	This launches the Host Sync Viewer window which displays information about your current session/host application including Tempo, Transport State, Time signature, etc.
Other	
History depth	Lets you set how many levels or steps are remembered in the History dialog to control the size of the history log file.

Keyboard Support	Keyboard support must be set to full for all Keyboard shortcuts to be available. Available options include Full (full keyboard support), Minimal (only TAB, arrow keys, and ENTER), or None (Keyboard shortcuts turned off).
Auth & Updates	
Check for Updates	Selects the frequency with which Alloy 2 checks for version updates. Choose between daily, weekly, monthly, and never.
Check Now	Instantly checks if your version of Alloy is currently up to date.
Remove Authorization	Removes the current authorization of Alloy.
More Information	Directs to the supporting documentation for authorization.

Spectrum Options

The Spectrum tab lets you control Alloy's spectrum meters. These controls are listed in the table below.

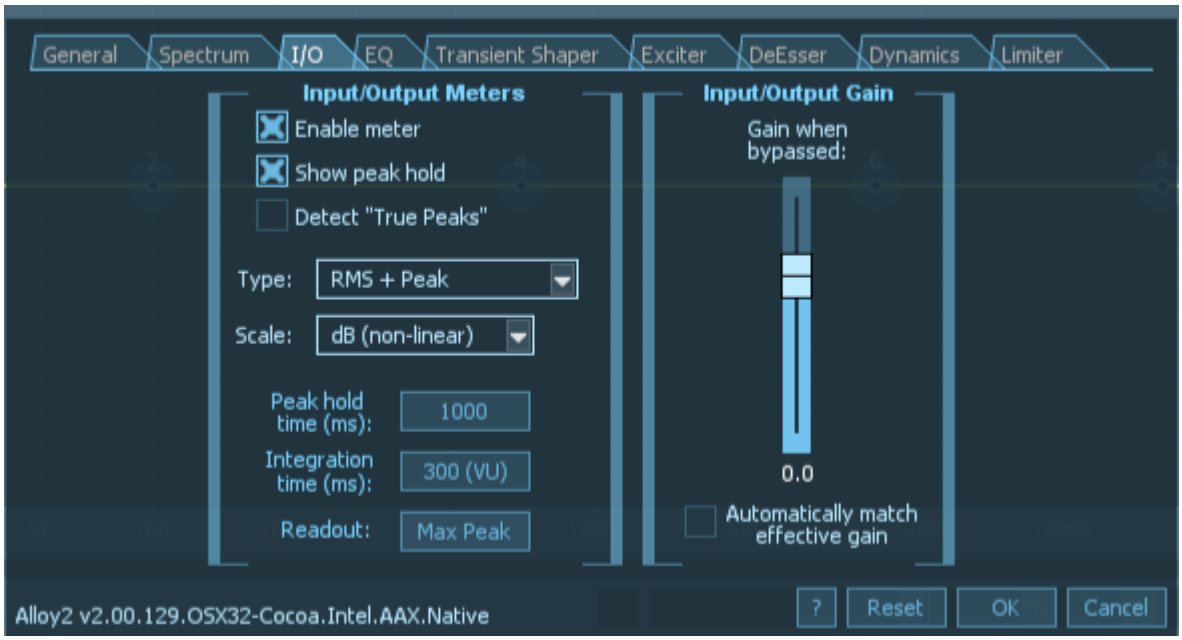


Spectrum Options	
Enable mini-spectrum	Turns on or off the spectrum meter that appears on top of multi-band modules.
Spectrum type	Lets you select between four types of spectrums: **Linear:** a continuous line connecting the calculated points of the spectrum **1/3 octave:** splits the spectrum into bars with a width of 1/3 of an octave. Although the spectrum is split into discrete bands, this option can provide excellent resolution at lower frequencies. **Full Octave:** splits the spectrum into bars with a width of one full octave. **Critical bands:** splits the spectrum into bands that correspond to how we hear, or more specifically how we differentiate between sounds of different frequencies. Each band represents sounds that are considered "similar" in frequency.
Peak hold time	You can click on the Peak Hold time to select between specific hold times in milliseconds, or Infinite, where the peak is held indefinitely. You can reset the peaks by clicking on the spectrum.
Average time	Averages the spectrum according to this setting. Higher average times can be useful for viewing the overall tonal balance of a mix, while shorter average times provide a more accurate display. Real Time is the shortest average time settings while the Infinite setting will continue to calculate

	indefinitely.
Window size	Controls the trade off between frequency and time resolution in the spectrum. Higher values will let you see smaller peaks in the spectrum, but the spectrum will update more slowly.
Overlap	Controls how often the spectrum updates. More overlap will cause the spectrum to update more frequently, at the expense of increased CPU usage.
Window	Selects a window type for the spectrum. In most cases the default window type will work well, but you can choose from a variety of window types. Each window type has different amplitude and frequency resolution characteristics.
Fill Spectrum	Allows you to display the real-time spectrum as a solid graph as opposed to a line graph. This option can be used to differentiate the real-time spectrum from the peak hold spectrum.
Show Peak Hold	Toggles whether Alloy displays and holds the peaks of the spectrum.

I/O Options

The I/O tab lets you control Alloy's input/output meters and gain when bypassed.

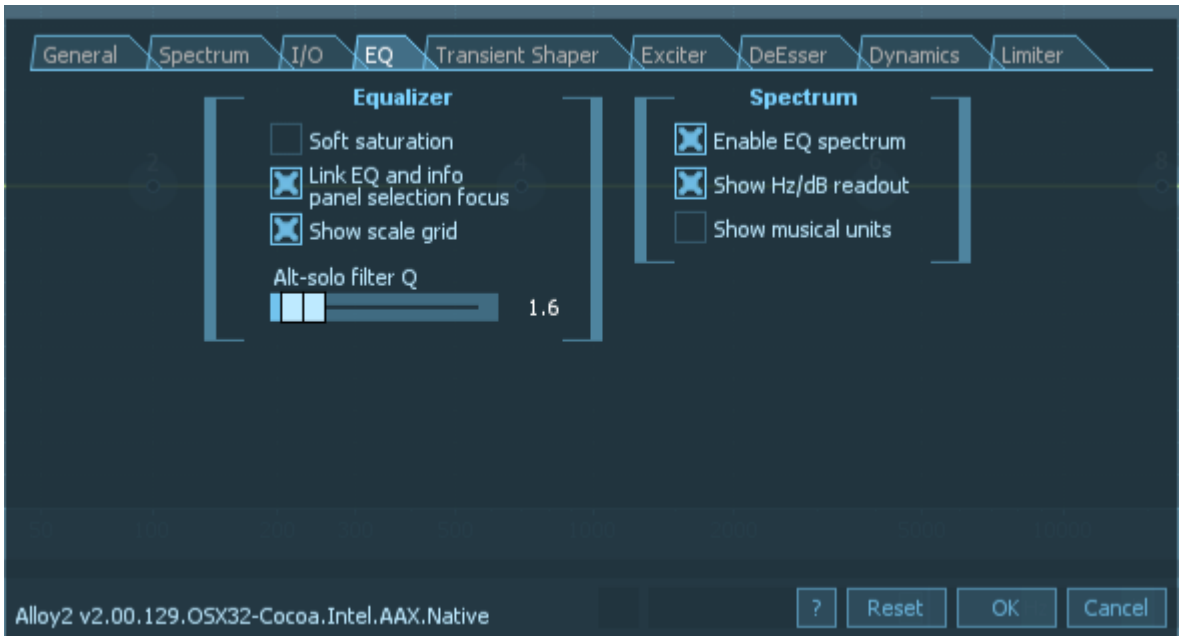


Input/Output Meter Options	
Enable meter	Turns on or off the level meters
Show peak hold	Turns on or off the peak hold display for the level meters
Detect "True Peaks"	This examines the levels of the analog signal that will eventually be produced by D/A conversion, as well as the levels of each digital sample (inter-sample peaks). An analog signal's peak level can exceed its corresponding digital signal's peak level by more than 3 dB!
Type	Allows you to set the type of metering used for Alloy's I/O meters. Available options include RMS, Peak, and RMS+Peak. See the Input and Output Meters page for info about metering options.
Scale	The available options for scale are dependent on the type of meter selected. For RMS, Peak, and RMS+Peak you can choose between dB (linear) and dB (non-linear).
Peak hold time	If peak hold is on, clicking this button allows you to cycle through different peak hold times. The choices are 5 ms, 250 ms, 500 ms, 1000 ms, 5000 ms, and infinite. If set to infinite, the peak value will be held until you double click on the meter.
Integration time	This setting only applies if the level meter displays RMS. It lets you specify the integration time for the RMS calculation. In most RMS meters, the integration time is set to around 300ms.

Readout	Allows you to control what is displayed by the numeric display on top of the meters: peak or actual (real time). If set to "Max Peak", the display will reflect the meter's highest peak value encountered during processing. If set to "Current", the display will reflect the meter's current value of the level. If there are two levels displayed (Peak+RMS), we read the RMS value.
Gain when bypassed	See the Gain When Bypassed Function page for info about the gain when bypassed feature.
Automatically match effective gain	When the Automatically match effective gain feature is engaged, Alloy automatically sets the amount of gain added when Alloy is in bypass mode.

EQ Options

The EQ tab lets you control Alloy's equalizer module options.

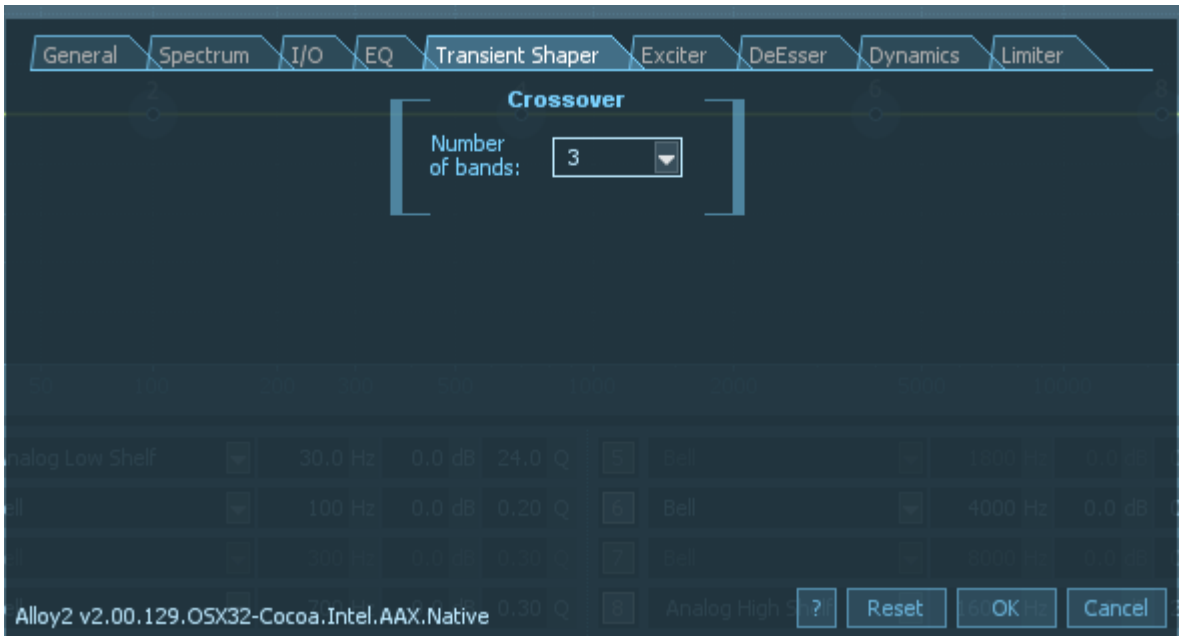


Equalizer Options	
Soft Saturation	Turns on an algorithm which will gradually rolloff the level through EQ bands if they start to saturate. Alloy can accurately process signals with extended dynamic ranges and you can leave this off in most cases. The exception would be if you had reordered the modules so that the Paragraphic Equalizer was the absolute last process in the chain, in which case this option can soften any clipping that occurs in the EQ before being sent to the output.
Link EQ and info panel selections	When enabled, the EQ curve's selected band will automatically update when changes are made in the info panel. This makes it easy to find which band you're changing in the info panel. Also, when you change the active band by clicking on the EQ curve, the focus will move to the new active band.
Show Scale Grid	Underlays a grid representing frequency and level in the spectrum window.
Alt-Solo Filter Q	Allows you to set the default Q or width of the filter that is activated when Alt-clicking on the Paragraphic Equalizer.
Spectrum Options	
Enable EQ Spectrum	Turns on or off the spectrum meter in the Equalizer module.
Show Hz/dB readout	Allows you to display a continuous readout of the mouse position (in Hertz and decibels) when in the Equalizer module.

Show musical units	Allows you to display frequency labels as notes (for example, A 4) in addition to Hz.

Transient Shaper Options

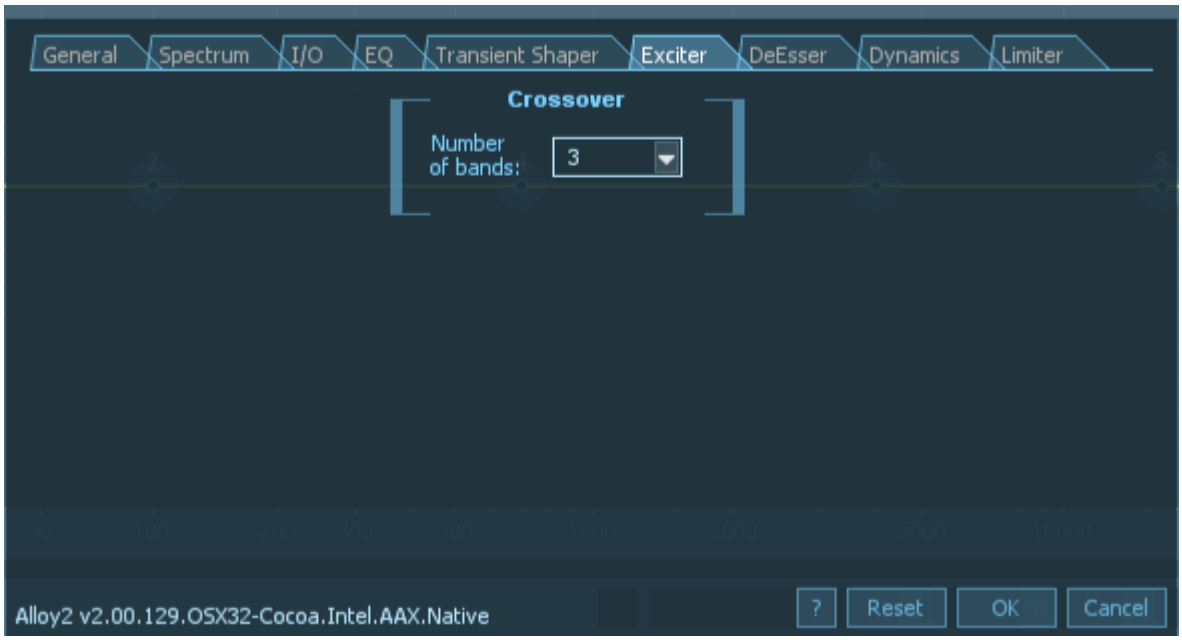
The Transient Shaper tab lets you control Alloy's Transient Shaper module options.



Transient Shaper Options	
Number of bands	Allows you to set the default number of bands available in the Transient Shaper module when processing in multi-band mode. (up to 3)

Exciter Options

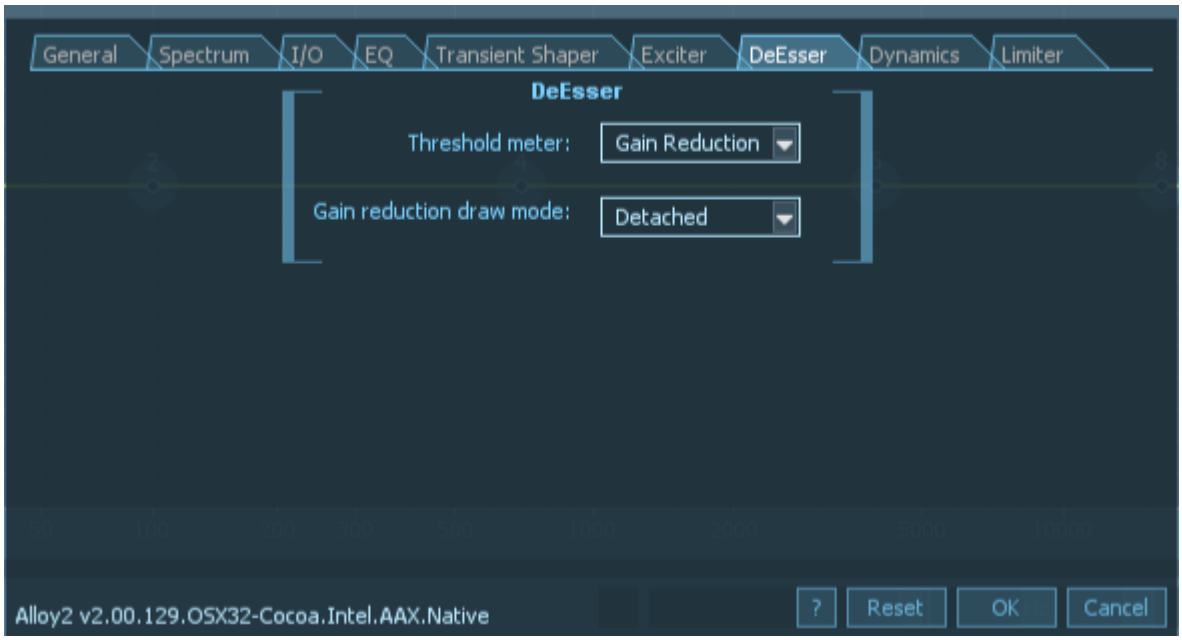
The Exciter tab lets you control Alloy's exciter module options.



Exciter Options	
Number of bands	Allows you to set the default number of bands available in the Exciter module when processing in multi-band mode. (up to 3)

De-Esser Options

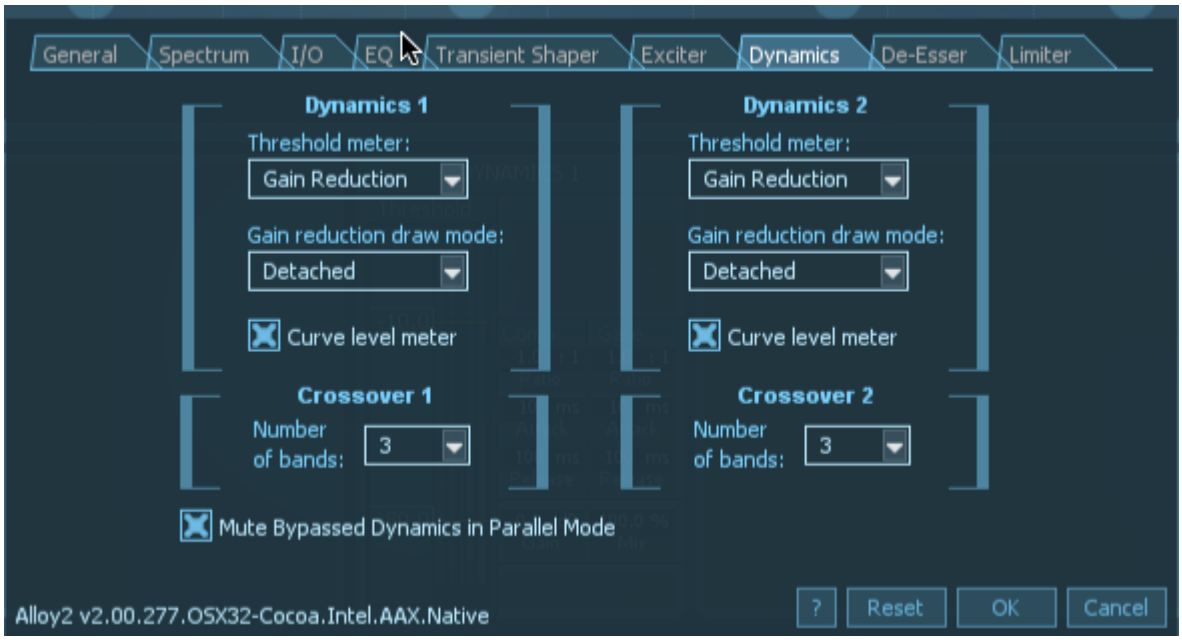
The De-Esser tab lets you control Alloy's De-Esser module options.



De-Esser Options	
Threshold Meter	Selects whether the Threshold Control displays a level histogram meter or a gain reduction meter.
Gain Reduction Draw mode	Selects whether the gain reduction meters in the Threshold Control are detached or attached to the level meters.

Dynamics Options

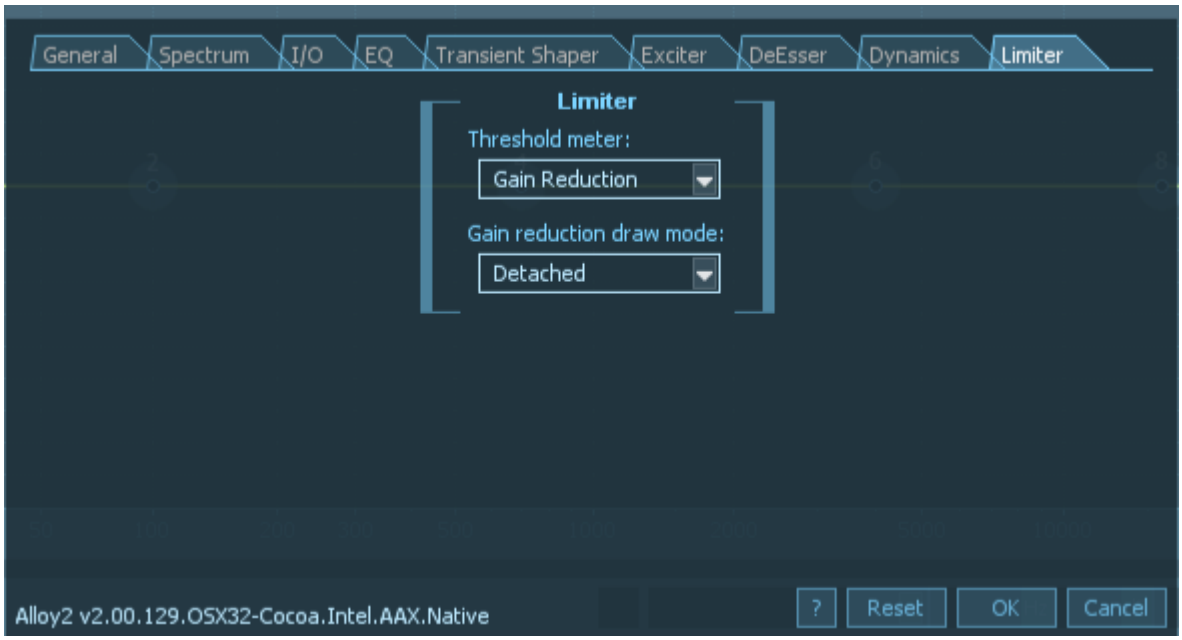
The Dynamics tab lets you control Alloy's Dynamics module options.



Global	
Mute Bypassed Modules in Parallel mode	When Dynamics 1 and 2 are in parallel and this option is checked ON, bypassing either Dynamics 1 or Dynamics 2 will mute the bypassed module. When unchecked, bypassing either module will make the module output a dry unprocessed signal.
Dynamics 1 & 2 Options	
Threshold Meter	Selects whether the Threshold Control displays a level histogram meter or a gain reduction meter.
Gain Reduction Draw Mode	Selects whether the gain reduction meters in the Threshold Control are detached or attached to the level meters.
Curve level meter	Allows you to turn on or off the dynamics curve level meter.
Crossover	
Number of bands	Allows you to set the default number of bands available in the Dynamics modules when processing in multi-band mode. (up to 3)

Limiter Options

The Limiter tab lets you control Alloy's Limiter module options.



Limiter Options	
Threshold Meter	Selects whether the Threshold Control meter displays a level histogram meter or a gain reduction meter.
Gain Reduction Draw Mode	Selects whether the gain reduction meters in the Threshold Control are detached or attached to the level meters.

Tips and Shortcuts
CPU Optimization

Unlike many single task plug-ins, Alloy 2 harnesses the power of six plug-ins in one. Alloy performs a significant number of calculations when running. The combination of multiple DSP modules performing analog modeling and a half dozen real time meters dictates that it requires more CPU processing than a typical plug-in. While continuing to push the limits of high quality audio signal processing, Alloy 2 offers significant improvements concerning CPU optimization allowing your sessions to run more efficiently.

If you do start to reach the limits of your particular machine, here are some tips for optimizing your CPU:

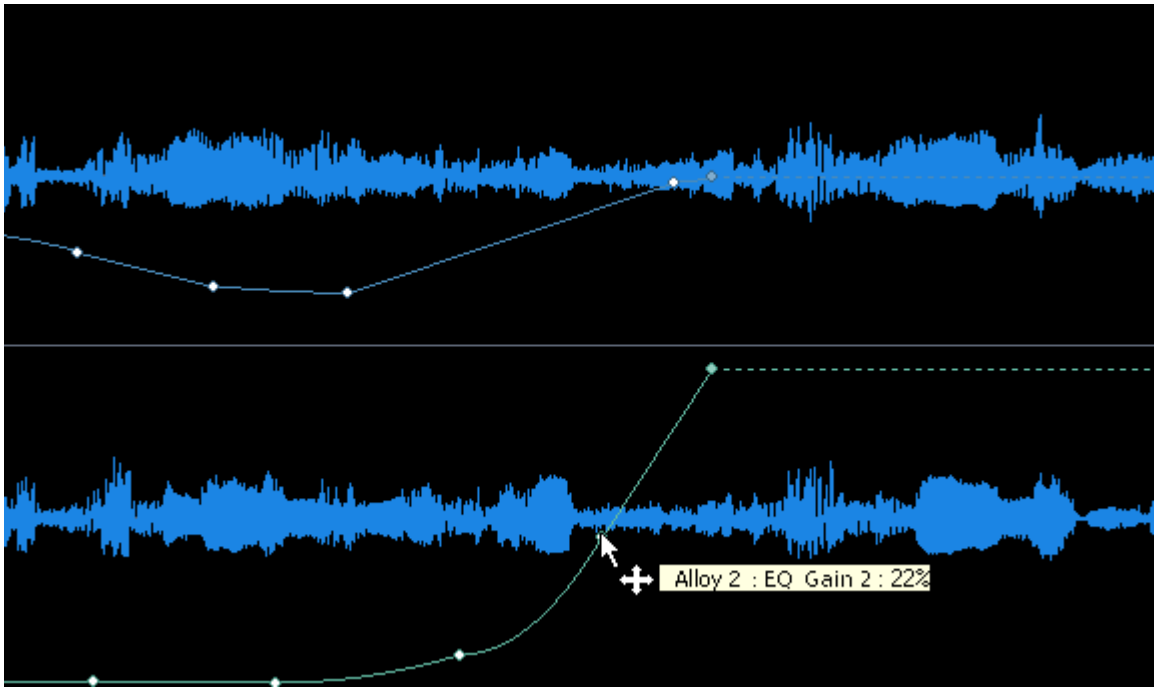
- If you're not using modules for processing, you should be sure to bypass them to conserve CPU power.
- Try changing the buffer size and/or latency setting in your host application. When buffers are too high (latencies are too large), meters will update very slowly and performance may suffer.
- Using fewer crossover bands can save significant CPU. Try using single band dynamics, for example, instead of all 3 bands. See Using Multi-band Modules for instructions on how to change the number of crossover bands.

Automation

Automation allows you to specify changes to parameters over the duration of a mix - such as stereo widening during a chorus or boosting an EQ during a solo. You can automate more than 200 parameters in Alloy using host applications which support effects automation.

Using Automation in Alloy

The implementation and specifics of automation are dependent on the host application, so we refer you to the documentation of the host app for setting up an automated mix. In general, though, you insert Alloy as an ordinary effect on a track, then in the track view of the host app assign automation envelopes to it. These envelopes control how Alloy parameters are changed over the course of the mix. In this case, most of your "tweaking" is done in the track view of the host app, dragging curves and envelopes as opposed to changing controls in Alloy. For example, in the screenshot below we're adjusting the gain of an EQ band in Alloy from a host application's track view.



Notes specific to Alloy automation:

- Keeping track of all the parameters. We've done our best to provide the controls with intelligent names, but it can be overwhelming when you initially see the list of automatable parameters in Alloy. Don't panic. Scroll through the list, remember that each multi-band module has up to 3 bands per parameter (e.g. you have high, mid, and low bands) and in the dynamics module each band can have two sections (compressor and gate). So, for example, "Dyn1: Band 1 Comp Threshold" means in the first Dynamics module, the compressor threshold for the low band.

- When you automate a control from the track view, you can see the control on the Alloy interface move under the control of the host application. We purposely don't update the position of the control as often as we could. It takes CPU to redraw controls and it takes CPU to process audio. So we update the drawing of the control less frequently. Therefore, it may look like the control is moving in steps, but rest assured that the audio is being processed smoothly.

- When automating in a track view with envelopes, but working mainly with the Alloy interface, we found it helpful to be able to "see through" Alloy so you can monitor Alloy meters and controls but see the track view and automation curves behind Alloy. So we provide an Opacity slider in the main options dialog. This allows you to see through Alloy to monitor both what Alloy is doing and what is happening with the automation curves. Note that this is not available in all host applications, and it does require more CPU than a standard "opaque" plug-in if you set the Opacity to less than 100%.

Shortcut Keys and Mouse Support

Turn Keyboard Support On or Off

You can turn Keyboard Shortcuts On or Off from the General Options menu. Keyboard support must be set to Full for all Keyboard shortcuts to be available. Available options include Full (full keyboard support), Minimal (only TAB, arrow keys, and ENTER), or None (Keyboard shortcuts turned off).

Alt+click

If you Alt+click on the "active" light of a module on the faceplate that module is made active (on) and all other modules are bypassed.

If you Alt+click on the Bypass ("b") button of a multi- v band that band is solo'ed.

If you Alt+click on a module in the preset system that module is made active and the rest inactive.

Alt+clicking on most other controls will reset them to their default value.

Wheel Mouse Notes

If you have a wheel mouse, you can adjust most controls (I/O gain, sliders, etc.) by simply positioning the mouse cursor over the control and rolling the wheel. Hold CTRL to move in smaller increments and SHIFT to move in larger increments. If the wheel has no effect, try clicking on the plugin to make sure Alloy has the keyboard focus.

In the Paragraphic Equalizer, you can adjust the Q of a selected band or bands with the wheel.

In the Paragraphic Equalizer table (accessed with the "Show Info" button) you can adjust a value by holding the mouse over the value and rolling the wheel.

In the History screen, you can use the wheel to scroll through the History list.

Copy/Paste Support

Right-click (under OS X you can also ctrl-click) on any slider to bring up a context menu allowing you to copy and paste its value. You can copy/paste between sliders, even if the sliders are in different instances of the plugin. You can also copy/paste between a slider and a text editor such as Notepad or TextEdit in order to see the slider's value to a much higher precision than the plugin displays.

Mouse and Meters

You can zoom in and out on level meters and level histograms by holding down the Ctrl key under Windows or the Command key under OS X and clicking with the left mouse button to zoom in or the right mouse button to zoom out. Under OS X you can also Command-ctrl-click to zoom out.

You can reset the peaks or averaging of the spectrum by clicking on the spectrum.

You can reset a meter's peak indication by clicking on it. You can also reset a level meter's clipping indicator by clicking on the clipping indicator (the red "over" light at the top).)

Here is a list of Available Shortcut Keys

Front Panel	
Ctrl + 1 through 8 (Command + 1 through 8)	Display each of the seven module screens with the Ctrl key in combination with the following 1-8 keys:

on OS X	1: Overview 2: EQ 3: Transient 4: Exciter 5: Dynamics 1 6: Dynamics 2 7: De-Esser 8: Limiter
Ctrl + Shift + 1 through 9 (Command + Shift + 1 through 9) on OS X	Displays options dialogs: 1: General Options 2: Spectrum Options 3: I/O Options 4: EQ Options 5: Transient Shaper Options 6: Exciter Options 7: Dynamics Options 8: De-Esser Options 9: Limiter Options
Ctrl + P (Command + P) on OS X	Toggles Preset Manager
Ctrl + B (Command + B) on OS X	Toggles bypass for all Alloy processing.
Alloy Modules	
Tab and Shift + Tab	Select the next or previous control. You can also select a control by clicking on it with the mouse. To select a slider without moving the slider, click on the slider label.
Home and End	Set the value of the selected control to its lowest or highest value, respectively.
Arrow keys	Turn the selected control up or down. Use with Shift key for larger increments. You can select a control by clicking on it. To select a slider without moving the slider, click on the slider label.
Page Up and Page Down	Turn the selected control up or down in larger steps. Use with Shift key for larger increments.
Enter	Toggles the value of a checkbox or button control if selected, or enters numeric entry mode if a fader is selected.

Space Bar	Toggles the value of a checkbox if selected.
Direct Entry	Note that you can enter a numeric value directly for a selected control by pressing Enter or double-clicking on the numeric value label, entering a new number, and pressing the Enter key.
EQ	
Alt + click	Apply a bandpass filter at the mouse cursor to "solo" the frequencies under the cursor. While holding the alt key, the mouse wheel adjusts the Q of the filter.
Ctrl + click (Windows) Command + click (OS X)	Selects multiple EQ bands to adjust them as one group
Shift + click	Constrain mouse movements (dragging an EQ band) in either the vertical or horizontal direction.
Double-click	Double click on a band to reset it to its default position. Double click anywhere in the spectrum without an active node to activate a node in that area.
Left/Right arrow keys	Adjust the frequency of a selected band or bands. Use with Shift key for larger increments.
Up/Down arrow keys	Adjust the gain of a selected band or bands. Use with Shift key for larger increments.
Alt + up/down arrow keys	Changes the filter type (bell, lowpass, highpass, etc.) for the selected band.
Alt + left/right arrow keys	Select the next or previous EQ band.
Ctrl + left/right arrow keys	Adjust the Q of a selected band or bands. Use with Shift key for larger increments.
Input/Output Gain	
Ctrl + - Ctrl + =	Increase the left and right input gain. Use with Shift key for larger increments
Ctrl + [Ctrl +]	Decrease the left and right input gain. Use with Shift key for larger increments
Ctrl + ; Ctrl + '	Increase the left and right output gain. Use with Shift key for larger increments
Ctrl + . Ctrl + /	Decrease the left and right output gain. Use with Shift key for larger increments
Ctrl + ,	Toggle locking the left and right input or output gains

Ctrl + \	
Misc	
Ctrl + Z	Undo the last change made to a control.
Ctrl + Y	Redo the last change made to a control.
Alt + 0 through 9 or Ctrl + Alt + 0 through 9	Sets the opacity/transparency of the Alloy UI. 0 is fully opaque (not transparent at all). After that, 1 through 9 set increasing levels of opacity.
Esc	Cancels dialog boxes.
F1	Launch help for active module
F3	Toggle options dialog visibility
F4	Toggle filter graph visibility
F5	Toggle History visibility
F6	Resets active module

iZotope Customer Support

How to purchase the full version of Alloy 2

If you are using the demo version of Alloy and would like the full version, you can purchase Alloy direct from the iZotope online store.

http://www.izotope.com/products/audio/alloy.

Once your purchase is complete you will be sent an e-mail confirmation and a full version serial number that can be used to fully authorize your current installation of Alloy.

iZotope Customer Support Policy

iZotope is happy to provide professional technical support to all registered users absolutely free of charge. We also offer valuable pre-sales technical support to customers who may be interested in purchasing an iZotope product. Before contacting iZotope support, you can search our Product Knowledgebase to see if the solution to your problem has already been published.

http://www.izotope.com/support/center

How to contact iZotope for Technical Support

For additional help with Alloy, please check out the support pages on our web site at http://www.izotope.com/support or contact our customer support department at support@izotope.com.

iZotope's highly trained support team is committed to responding to all requests within one (1) business day and frequently respond faster. Please try to explain your problem with as much detail and clarity as possible. This will ensure our ability to solve your problem accurately, the first time around. Please include all system specs and the build/version of Alloy that you are using.

Once your support request is submitted, you should automatically receive a confirmation email from iZotope support. If you do not receive this email within a few minutes please check your spam folder and make sure our responses are not getting blocked. To prevent this from happening please add support@izotope.com to your list of allowed email addresses.

International Distribution

Support is also available from our international distributors worldwide, for any customers who purchased their iZotope products through a certified iZotope distributor. Check with your local distributor for their availability. If you would like help locating your local distributor please contact iZotope support.

http://www.izotope.com/support

Thanks for using Alloy!

- the iZotope team

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